Lecture
ON
FOREIGN BODIES IN THE AIR-PASSAGES.

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(*Concluded from page 605.*)

A FOREIGN BODY, having passed down the trachea, usually enters the *right* bronchus. The reason is that the right bronchus is larger than the left, and the septum between the opening of the bronchi is inclined to the left.

The *physical signs* of a foreign body in the bronchus are—natural resonance on percussion, with total absence, or feebleness, of the respiratory murmur over one lung, according to the degree of obstruction of the bronchus; diminished mobility of the obstructed side; and exaggerated, puerile breathing over the unobstructed lung. The bronchus will be obstructed more completely by a body of a globular form than by one which is flat or of irregular outline. In the case of Mr. Brunel, a half-sovereign having fallen into the right bronchus, careful auscultation by Dr. Chambers and others discovered no difference in the respiratory sounds over the two lungs. If the body be movable, so as to be coughed upwards towards the larynx, the respiratory sound returns for a time over the previously obstructed lung. In some cases there is the alternation of the physical signs of obstruction of the bronchus, and distressing spasm of the glottis when the body is driven up to the larynx. This is especially apt to occur with foreign bodies of low specific gravity, such as vegetable substances; it is less likely to happen with heavy metallic substances, except when the patient's body is inverted. A great specific gravity of a foreign body, however, does not of necessity prevent its being expectorated. Thus, in one case a leaden shot was expectorated; in another, a Portugal ducat; in another, an iron nail; in another, an artificial tooth (Stokes, p. 283); in another, an elongated glass bead (case in the hospital, to be presently related); and in another, a sixpence.[1] It is probable that in some of these cases the foreign body has been coated with mucus, which would of course lessen its specific gravity. In a case recorded by Dr. Spitta, to which I shall hereafter refer, a metal screw encased in mucus was easily expectorated by a child.

The foreign body, having entered one or other bronchus, may occasion scarcely any inconvenience, more especially if its shape and size are such as not to entirely close the tube. This was the case with a boy under Sir William Fergusson's care in the hospital a few years ago, who had a long glass bead in his left bronchus, as shown by comparative feebleness of respiratory murmur on that side. As there were no symptoms of suffering in the lung or elsewhere, nothing was done. He went home to Harrow, and after several months he one day gave a cough, and said, "Oh, here is my bead."

In the majority of cases, however, there are symptoms of distress. The mere obstruction of a bronchus may cause urgent dyspnœa, by suddenly and greatly lessening the vital capacity of the lung. Then usually there are symptoms of irritation and inflammation of the lung, pain, dyspnœa, cough with blood-tinged expectoration, high temperature, and quick pulse. On physical examination there may be dulness on percussion, and crepitation. Most of these symptoms were present in the case of a boy who, a few years ago, was in the hospital, under the care of Mr. Henry Smith, and when the boy died, the lower lobe of the right lung was found engorged, and in parts consolidated and suppurating, with a plum-stone in the main bronchus. One interesting phenomenon I observed in that case. The boy one day had a sudden increase of dyspnœa, which continued for some hours, and then rapidly subsided. During the height of his distress, I found signs of obstruction over the *left* lung, which had before been free, and more air than previously was heard entering the *right* lung. The stone must have shifted its position. It had probably been coughed into the trachea, and then fallen back into the left bronchus, and the increase of distress was due to the obstruction of the sound lung while the other was in a state of inflammation. In a few hours, the urgent dyspnœa subsided, and the signs of obstruction of the left bronchus had ceased.

The cerebral circulation often suffers in consequence of the violent cough, the defective aeration of the blood, and the resulting impediment to the circulation. Convulsions have occurred, and even apoplexy in old persons. In other cases the brain may be so injured that death takes place with cerebral symptoms, even after the removal of the foreign body.

One result of obstruction of a bronchus may be acute emphysema of portions of unobstructed lung from forcible over-distension.

The ultimate result of the inflammation set up by a foreign body is very variable. It may destroy life within a few days, or the inflammation may subside, and the body may remain for months, and even years, in the bronchus, without exciting violent symptoms. The ear of grass on the table was expectorated, encased in mucus, four months after it entered the trachea of a child, who recovered. Sir Thomas Watson quotes the case of a lady in which an ear of barley was expectorated seven years after its entrance. During that period she had suffered repeated attacks of hæmoptysis. Her recovery was perfect. In a case referred to by Dr. Stokes a piece of bone was expectorated, with copious hæmoptysis, after fifteen years. The patient recovered (p. 280). In one case, quoted by Dr. Gross, a piece of bone entered the windpipe of a child aged three, and was expelled sixty years afterwards. The symptoms were protracted cough, pain in the right side of the chest, purulent expectoration, and hæmoptysis. In another case, a piece of bone was expectorated after having remained seventeen years in the air-passages. Some relief occurred; but hectic and emaciation followed, and death in a year and a half afterwards. (Stokes, p. 283.) Other cases are recorded, in which the symptoms of pulmonary disease have continued long after the expulsion of the foreign body, and in some with a fatal result.

On the table there is a preparation showing an ear of rye in an abscess which is common to the lung and the liver through the diaphragm. Sir Thomas Watson gives the following history from Mr. Mayo:—"The young son of an English nobleman was riding in a carriage, and had an ear of rye in his mouth. The carriage made a sudden jolt, and the ear of corn disappeared. Little was thought about this at the time, but soon afterwards symptoms of pulmonary irritation set in, attended with hectic fever, and with the most fetid expectoration. The boy gradually sank." Dr. Spitta has recorded the case of a child, aged two years and a half, through whose larynx a metallic screw passed into the trachea and right bronchus, where it set up alarming inflammatory mischief. A month and two days after the accident the screw was coughed up, completely encased in mucus, and the child rapidly recovered.[2]

Diagnosis.—The chief grounds and elements of diagnosis in cases of a foreign body in a bronchus are:—1. Signs of obstruction of one bronchus, usually the right, either partial or complete, and either persistent or intermitting. 2. Physical signs of obstruction of the bronchus, alternating with symptoms of laryngeal irritation and spasm. There may be a sudden rush of air into the lung when the foreign body is coughed up towards the larynx, and an equally sudden obstruction of the bronchus when the body falls back again. 3. Signs of irritation and inflammation of the lung may be present, but when the bronchus is completely obstructed there may be no moist sounds or respiratory sounds of any kind audible over the obstructed portion of lung. 4. The symptoms already mentioned occur suddenly in a person either previously healthy or labouring under symptoms of a different class.

Usually a foreign body passing through the larynx goes into one or other bronchus, but Dr. Stokes quotes one case in which the trachea was obstructed (p. 288). A gentleman aged twenty, previously in good health, while conversing in the act of eating a piece of cheese after a hearty dinner, suddenly fell from his chair in a state of insensibility. On the supposition that a foreign body had become fixed in the œsophagus, a probang was speedily passed, and after about ten minutes he partially recovered. Soon after, the attack recurred with great violence; the face was much congested,

[1] Mr. Cock's case, quoted in Chelius's Surgery, vol. ii., p. 388.

[2] THE LANCET, September 10th, 1876.

and the breathing spasmodic and stertorous. He was then bled twice without relief. A loud rattling in the throat came on, the patient tossed his arms about, and all the muscles of inspiration were in violent action. The surface of the body became pale and cold. Hours had now elapsed, and it began to be suspected that the case was one of tracheal obstruction. The chest was normally resonant; but the vesicular murmur was everywhere extremely feeble, notwithstanding the violent efforts of inspiration, and there was an increasingly loud rattle in the trachea. Tracheotomy was performed, a crucial incision being made through the tube, and the angles cut off, when suddenly a mass of pultaceous matter was ejected through the opening, with complete and instantaneous relief to the symptoms. Respiration became easy, the expansion of the lung full and audible, the patient breathed through the glottis, and recovered without a bad symptom. In about four weeks, however, he had some symptoms of cerebral irritation, and a fit resembling epilepsy. During the next two months these attacks recurred several times, becoming gradually less severe. They then ceased entirely, and he has had no return. They were probably a result of the disturbed cerebral circulation during the hours of apnœa.

Sir B. Brodie refers to two cases in which a foreign body was found in the trachea after death.[3] In one case the foreign body was the berry of the bladder-senna, about the size of a large pea. The patient was a child aged six. In the other a portion of the claw of a lobster was found in the trachea of a child aged twelve.

It is obvious that a body sufficiently large to obstruct the trachea must cause more urgent distress than results from the obstruction of a bronchus. In such a case the respiratory phenomena will be the same on the two sides, and the diagnosis will depend on the absolute feebleness of the respiratory sounds over the entire chest, and not on the comparison of the respiration over the two sides.

In some cases the foreign body, when movable in the trachea, has been heard to strike against the larynx when it was driven upwards by a forcible expiration. A plum-stone in one case and a bean in another was thus audible.[4] In one case an orange pip, and in another a bean, was *felt* to strike against the larynx at each expiration when the finger was placed on the trachea.[5]

It should be borne in mind that the impaction of a foreign body in the œsophagus may compress the posterior membranous wall of the trachea, and cause the same symptoms as if it were actually in the trachea. In a doubtful case, therefore, a bougie should be passed down the œsophagus. Dr. Stokes mentions one case in which a piece of money lodged in the œsophagus caused croupy breathing and other laryngeal symptoms (p. 265). And another case in which such symptoms were produced by a plum-stone in the œsophagus that his first impulse was to perform tracheotomy with his penknife. An œsophageal bougie was introduced, and the substance having been pushed into the stomach, the symptoms ceased, and a day or two after the plum-stone with which the child was known to have been playing previous to the accident, was voided by stool.

We have now to consider the general rules to be observed in the *treatment* of cases in which a foreign body is lodged in the air-passages.

A foreign body in the larynx is a continual source of danger; therefore it should be removed as speedily as possible, even though the present symptoms may not appear alarming or very distressing. By the aid of the laryngoscope a foreign body anywhere above the glottis may not only be seen, but in most cases removed by properly constructed curved forceps. If, in consequence of its shape or position, it cannot be removed from above, an opening below—either laryngotomy or tracheotomy—may enable the surgeon, as in Mr. Smith's case before mentioned, to push the coin or other foreign body up into the mouth by means of a bent probe.

It may be possible, by means of the laryngeal mirror, to see a foreign body in the upper part of the trachea, and thus to confirm the diagnosis. If the obstruction is in the trachea, and if the symptoms are urgent, no time should be lost in opening the trachea, when the body will probably be spontaneously expelled, or it may be extracted by forceps.

A foreign body having passed into the bronchus, what is to be done?

It should be borne in mind that foreign bodies of various kinds have been expectorated without surgical aid. For instance, the bead in the case of Sir Wm. Fergusson's patient. Sir Thomas Watson mentions the case of a boy who, after several weeks, coughed up a small nail; and in Dr. Spitta's case, before mentioned, a metallic screw was similarly ejected. Tracheotomy, therefore, is not to be resorted to immediately and as a matter of course in all cases. There are, however, three classes of symptoms which call for immediate surgical interference. These are:—1st. *Persistent and urgent dyspnœa*, resulting from the lessened vital capacity of the chest occasioned by the obstruction of a main bronchus. 2nd. *Paroxysmal dyspnœa*, resulting from spasm of the glottis occasioned by the foreign body being from time to time coughed upwards against the larynx. 3rd. *Symptoms of irritation and inflammation of the lung*, which, if allowed to continue, may speedily lead to fatal disorganisation.

Tracheotomy in the case of a foreign body in a bronchus may be a means of relief in various ways. 1. It may allow of the expulsion of the offending substance by an effort of coughing. 2. By means of long and slender forceps the foreign body may be extracted from the bronchus.

Mr. Liston once succeeded in extracting a piece of bone from the right bronchus of a woman aged thirty-eight, after it had been fixed there more than six months. The removal of the bone gave immediate relief, and the patient left the hospital well in nine days.[6] In another case a button was removed from the right bronchus of a boy aged eight.[7]

The facility of grasping a foreign body will depend much on its form. A spherical body, or one nearly spherical, would probably be in close contact, on all sides, with the bronchus, and could not be seized by forceps without risk of injuring the bronchial tube. A flat body, like a coin, offers the greatest facility for extraction, and is also one little likely to be expelled by coughing, on account of its density, and the small surface presented by its edges to the expiratory current of air.

In the case of Mr. Brunel, Sir B. Brodie and Mr. Aston Key failed to seize or even to touch the half-sovereign, which had entered the right bronchus. The contact of the forceps with the internal surface of the trachea induced violent coughing, with convulsive action of the diaphragm and abdominal muscles, so that it was not deemed prudent to persevere, and the coin was ultimately got rid of by a process illustrative of a third mode in which tracheotomy affords relief in this class of cases.[8] The following is an abstract of the remarkable and instructive case of Mr. Brunel, to which I have before referred:—Mr. Brunel, on the 3rd April, 1843, being engaged immediately after dinner in amusing some children, placed a half-sovereign in his mouth. It slipped behind the tongue, and a violent fit of coughing, in which he had the appearance of being nearly choked, was the consequence. This was immediately followed by vomiting. In the course of the evening he coughed at intervals, and a sense of soreness and stiffness of the throat remained for twenty-four hours. During the next two days he experienced little or no inconvenience. Then he was exposed to cold; had cough, expectorated mucus tinged with blood, and experienced pain in the situation of the right bronchus. These symptoms continued. Dr. Chambers and Sir B. Brodie were consulted, and agreed that the half-sovereign was in the right bronchus. This opinion was confirmed by an experiment which Mr. Brunel made on himself. He had placed himself in a prone position, with his sternum resting on a chair, and his head and neck inclined downwards, and, having done so, he immediately had a distinct perception of a loose body slipping forward along the trachea. A violent convulsive cough ensued. On resuming the erect posture, he again had the sensation of a loose body moving in the trachea, but in the opposite direction—that is, towards the chest. This experiment was afterwards repeated by the physician and surgeons. On the 25th April he was strapped in the prone position on a platform made movable on a hinge in the centre. By this means the head was lowered to an angle of about eighty degrees with the horizon. At first no cough ensued, then the back of the chest was struck by the hand, and he began to cough violently. This process was twice repeated, and on the last occasion the cough was so distressing, and the sense of choking so alarming, that it was thought imprudent to repeat the ex-

[3] Med. Chir. Trans., xxvi, 293-4.
[4] Ryland on Diseases of the Larynx, p. 283-4.
[5] Report of two cases by Mr. Couper, of the London Hospital; Brit. Med. Journal, Feb. 12th, 1870, p. 153.
[6] Ryland, op. cit., p. 300. Also Liston's Practical Surgery, p. 415.
[7] Chelius's Surgery, vol. ii. p. 402.
[8] Med.-Chir. Trans., xxvi., p. 286.

periment unless some precaution were used to render it safe. On the 27th April tracheotomy was performed, the object being twofold: first, to extract the coin with the forceps if possible; second, that the artificial opening might prevent the risk of suffocation by spasm of the glottis when the body was again inverted. I have already stated that the coin could not be grasped or even touched by the forceps. On the 13th May—the wound in the trachea having been kept open by the occasional introduction of a probe—the patient was again placed on the platform, and inverted. The back was struck with the hand; two or three efforts to cough followed, and presently he felt the coin quit the bronchus, striking almost immediately afterwards against the incisor teeth of the upper jaw, and then dropping out of the mouth. There was no spasm of the glottis, nor any of the distress which caused so much alarm on the former occasion. The patient quickly recovered.

In reading the correspondence of the Rev. Sydney Smith, I came across the following amusing reference to this celebrated case. Writing to Mrs. Grote, July, 1843, Sydney Smith says: "I met Brunel at the Archbishop's (of York), and found him a very sensible man. He said that when he coughed up the piece of gold, the two surgeons, the apothecary, and the physician, all joined hands and danced round the room for ten minutes, without taking the least notice of his convulsed and half-strangled state. I admire this very much." The patient probably somewhat exaggerated the duration of the dance.

Sir T. Watson refers to two cases in which, a shilling having passed through the larynx, the coin fell out when the body was inverted. In both cases the patients were men, and in neither case was tracheotomy performed.

There is one point of practical importance to be borne in mind when an attempt is made to dislodge a foreign body from the trachea or bronchi by placing the patient's head downwards. It is this—that at the moment of the inversion the patient should be directed to take *a deep inspiration*. In so doing he opens wide the glottis, and thus facilitates the exit of the foreign body. The inspiratory current of air would have no appreciable effect in retarding the movement of the foreign substance downwards by its own gravity, and it is essential for its escape that the glottis be widely open. The patient should be cautioned to make no noise in his throat at the moment of inversion. Any vocal sound of necessity implies a closed glottis, which would of course prevent the exit of the foreign body.

CASE OF UNUNITED FRACTURE, IN THE TREATMENT OF WHICH A PORTION OF DOG'S BONE WAS USED AS A MEANS OF PROCURING UNION.

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VARIOUS causes, both constitutional and local, have been assigned for the non-union of fractures. Among the former class, syphilis, scrofula, scurvy, pregnancy, lactation, the presence of cancer, and general debility, are mentioned, whilst paralysis, inflammation of the soft parts, deprivation of blood, disease of the bone, interposition of muscle or tendon between the fragments, the presence of a foreign body, and motion, are given as local causes. Of all the influences referred to, motion, in my opinion, ranks as the chief, if not the only, cause of non-union of fractures.

Very various plans of treatment have been adopted for the purpose of getting the fractured bone to solidify. The method used in the following case is probably novel in this country, but I have heard that a practice somewhat similar has been tried in China, unsuccessfully, however.

D. M——, a marine engineer, whilst at sea, on Jan. 3rd, 1873, sustained a simple fracture of both bones of the left forearm, about an inch and a half above the wrist-joint, caused by his having been driven by a heavy sea against a lifeboat. The arm was put up in splints and kept up for some weeks. On the removal of the apparatus it was found that the bones had not united. He did not reach land for eight months after the accident.

Patient, aged forty-three, and in good health, was admitted to Glasgow Royal Infirmary on Oct. 7th, 1873, nine months after the receipt of injury. Immediately after admission subcutaneous section of the flexible uniting medium was performed by the gentleman in whose wards he lay, and the arm was put up in splints for three weeks, but as union did not seem to be taking place, incisions were made along the radius and ulna, and the bones resected. The arm was again put up, and matters were progressing favourably, when, at the end of four weeks, erysipelas set in, and during its course necrosis of about three-quarters of an inch of the radius occurred. The limb was again put in splints and retained so for six weeks longer, when the external wounds were healed, but the bones had not united. Patient then left the hospital, having been in the house for three months and a half.

Aug. 15th, 1874.—The man was readmitted to-day for the purpose of having his arm amputated. In the absence of the regular surgeon I took charge of the case, and, a consultation having been called, amputation was unanimously recommended; at the same time permission was accorded me to make any possible attempt at saving the limb. On examination, the cicatrices of the former operations were seen lying on the inner and outer side of the false joint. The hand and lower fragments were drawn somewhat up towards the elbow, and hung swinging about, completely powerless. The lower end of the longer fragment of the ulna formed a hard, smooth projection, over which the skin was tensely drawn.

After having given the case some consideration, on the 14th of September the patient was taken into the theatre and placed under the influence of chloroform, while at the same time a retriever dog was being anæsthetised. I made an incision along the ulnar side of the arm, cutting down upon the ends of the fractured bone, and removing the fibrous band which alone formed the bond of union; the rounded points were removed by the saw, and a hole drilled obliquely through each squared end. The same process was repeated on the radial side, when it was found that an interspace of about three-quarters of an inch existed between the two fragments of the radius. In the meantime, Mr. Andrews, one of the senior students, and a very clever manipulator, had exposed the humerus of the quadruped, completely denuded of every tissue except the periosteum. The length of bone was accurately measured (three-quarters of an inch), while from half an inch beyond the end of the necessary length the periosteal covering was rapidly but carefully dissected, the bone sawn through, a hole drilled in either end obliquely, as in the radius and ulna, and at once placed between the ends of the radius, where it fitted accurately. Wires having been passed through the holes, the bones were firmly tied together, the loose half-inch margin of the periosteum of the foreign bone being carefully spread over the periosteum of the radius. The wound was stitched with silver wire, the bone sutures coming out at each end of the incision. Wires were passed through the ulna, tied together, and the wound treated in a similar manner. The entire operation was conducted under the carbolic acid spray. The arm was put up in gauze, and held in two rectangular splints.

Sept. 15th.—Patient complains of some pain in arm, but says he had snatches of sleep through the night after having had twenty-five minims of tincture of opium. After the operation there was a slight tendency to sickness, which was relieved by ice. Pulse 80, rather hard; tongue slightly furred, but moist; skin somewhat hot. Dressed; one or two of the stitches removed, as there were signs of tension and a slight blush around the sutures. To have tincture of opium as before. It is needless to give a detailed account of the dressings up till Nov. 3rd, when the ulna was found to be firmly united; but on the radial side small pouting granulations appeared, as if a foreign body were present, which, however, could not be detected by the probe.

Nov. 28th.—To-day the patient was put under chloroform, and the wires removed. That which had tied together the ulnar fragments was first caught with forceps, and taken out with great ease; it had apparently cut its way through the bone, and was lying immediately beneath the skin. I then went at the radial side with extreme curiosity and anxiety. Over the seat of fracture a small, elongated patch of extremely soft granulations was seated. At one end of the patch, the upper, one wire was caught, and easily extracted; the other was found at the lower end, and a considerable amount of force was necessary for its withdrawal. Although

the wire came away complete, it seemed to have been broken in the bone by the force exerted in extraction. With my finger-nail I scraped off the exuberant granulations, and with a probe examined the wound. Dead bone could not be detected, although the appearance of the small wound led me to suspect its presence. The fracture looked, on the whole, to be fairly united, and the patient was dismissed, with strict orders to return weekly for dressing and examination.

Thirteen weeks have elapsed since the date of operation, and the wires were perfectly bright on removal, the wounds having been kept antiseptic throughout. The man has gained in weight, and improved much in appearance. On leaving hospital boracic lint was used as dressing. The small wound remained open for twelve months, when the dog's bone, reduced to about half its size, came away, after which the wound healed completely. The radius appears to have fallen in somewhat towards the ulna, leaving a slight deformity.

D. M——, wearing a leathern support around the forearm, resumed his former occupation, at which he is still engaged. He called on me some weeks ago, and remains in perfect health, and retains a very useful arm. Thinking of Ollier's experiments with the periosteum, of the transplantation of skin from an amputated limb to ulcers, and of the transference of the mucous membrane of the rabbit to the human eye, I had some hope that the strange bone might have found a new home for itself in the human arm; failing which I knew it would secure perfect alignment of, and steadiness in, the ulnar fragments. Should a similar case occur again, I should adopt the same process, still hoping that the two bones might become one.

Glasgow.

A CASE OF EXTREME DISTENSION OF THE LOWER BOWEL IN A CHILD.

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Miss C——, aged eleven years, was brought to me by her aunt—her guardian—on the 6th of May, 1878. The aunt said the child had been suffering from obstinate diarrhœa for more than three months, notwithstanding medical care and nursing. The child was thin, pale, and shrunken, having a withered aspect. She had a hacking cough, with night perspirations, but there were no signs of lung disease. The heart-sounds were most remarkable for their great irregularity, both in power and frequency—now full and bounding, as high as 120, and then small and feeble, as low as 48, with extreme pallor and faintness; the face becoming suffused with cold perspiration, the recumbent position had to be at once assumed. This faintness would happen several times during the day. The bowels were at first relieved from twelve to fifteen times in the twenty-four hours, sometimes oftener, and always attended with great pain and straining. Now and again blood was intermixed with the evacuations, but never in any great quantity. No solid fæcal matter had passed during the last three months. The sphincter power of the bowel had been lost for more than three weeks, the motions passing involuntarily both by day and night. The child had continued and urgent thirst, but no appetite; no pain except during and immediately preceding an attempt at defecation. There was an ovoid fulness in the left iliac region, having a doughy feel, and painful when manipulated, simulating pelvic cellulitis.

The little patient being placed on the couch on her left side, the perineum was seen to be fully distended, much in the same way as by a descending head. The rectal orifice was dilated as large as a shilling, having a thin sharp margin or rim. Pressing upon this opening was a large condensed mass of fæcal accumulation. Every now and then the peristaltic action of the bowel pressed down the accumulation, dilating the rectal orifice and stretching the perineum exactly in the manner of an ordinary labour, each contraction being accompanied with a discharge of mucus stained by its contact with the contents of the rectum. This phenomenon I had the opportunity of observing, and, to my mind, it completely explained the "involuntary" action of the bowel, as well as the pain which "accompanied and immediately preceded an attempt at defecation."

In the after-part of the day I visited the patient at her lodgings in order to relieve her of her discomfort, if possible. The finger and injections were alike useless; the handle of an iron spoon was necessary to break down and remove the hard clay-like mass, which extended up to the "ovoid fulness in the left iliac region" before mentioned. The operation—a very unpleasant one to both parties immediately interested—occupied more than half an hour. After the bowel had been well washed out, a sedative was given to procure sleep, which had been greatly disturbed for several weeks. Castor oil was to be given early in the morning, and repeated if necessary.

May 7th, 5 P.M.—Slept well during the night. The bowels had been copiously relieved by the oil. Little or no thirst. Appetite better. In all respects greatly improved. The castor oil to be repeated every morning for the present; syrup of iron, quinine, and strychnia twice daily. A nutritious diet, but no stimulants.

10th.—Bowels well relieved twice daily. Sleeps without sedatives. Appetite good; no thirst; tongue clean and moist. Pulse regular and quiet, 94. The hacking cough has ceased. Has much improved in appearance; the old withered look having passed away. Having placed the patient in the lithotomy position, and separated the labia majora, it was observed that the triangular cushion of cellular tissue which constitutes the perineum had been completely removed, the recto-vaginal septum being reduced to a mere membrane; indeed, it had the appearance of a perineum which had been ruptured by labour, or other violence, down to the sphincter ani. There was no cicatrix; hence it may be supposed the cushion had been absorbed—the probable effect of continued pressure. I am specially careful to call attention to these facts, as they have a most important medico-legal interest. If this child had been the subject of violence, and I had been called upon to certify to her condition, it would have been most difficult to say that she had not been violated. In drawing the aunt's attention to these facts, I asked if the child had been kept under personal observation. She assured me that this had always been the case.

Chester-square.

A FILTH-POLLUTED SOIL.

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(Concluded from p. 506.)

THE influence of the soil in the production of malarial fevers scarcely needs comment, and perhaps the subject hardly comes within the scope of this paper; for malarious districts are, as a rule, thinly populated, and when towns arise the soil is drained, and the evil influence wholly or partially removed. Nevertheless, we know, on the authority of Sydenham, that before the great fire of 1666 in London, when the streets of the city were mostly unpaved, and drainage was almost unknown, malaria raged as a plague. Kings and rulers were not exempt from its effects. James I. and Cromwell are numbered among its victims. It is interesting also to find that by persistent neglect of sanitary precautions a naturally non-malarious soil may become productive of the disease. In the Mauritius, for instance, in 1866, a severe epidemic of malarial fever occurred, although the disease as a local growth was before unknown in the island. There coincided, says Dr. Parkes, accumulated impurity of the soil, lower subsoil water, consequent increased access of air, and a heightened temperature. From these conditions, it must be confessed, we should rather have expected the disease to be typhoid fever, than one purely, and in the restricted sense of the term, malarial.

The influence of the soil in the production or propagation of yellow fever, overwhelmingly strong as the evidence appears to be in support of such a conclusion, cannot here be discussed in detail. It may be noted, however, that in the history of this disease in all parts of the

globe, evidence of excessive contamination of the soil, or other analogous filth-influence, may almost invariably, if not invariably, be discovered. The peculiar localisation of the disease, as in cholera, forms, too, a conspicuous feature of every epidemic; so much so that, to mention an extreme case, in the old barracks at Fort Charlotte in the Barbadoes, admission to one particular building in sickly seasons was looked upon by the men to be equivalent to a death-warrant. And then how often does the evidence recur, as in the history of epidemics at Gibraltar, in the West Indies, and at Cadiz, that the lower rooms of a building proved much more fatal than the upper; or that, as in towns in Spain and in America, and especially in Algiers, the malignancy of the disease received a peculiar increment on the disturbance of the soil. How constant, again, is the experience in every part of the so-called yellow-fever zone, that in proportion as the soil is cleared, and drainage of the land improved, epidemics cease to appear, or recur at more distant intervals, and in milder forms.

But let us now turn to England. And here, as elsewhere, we can have, I think, no better proof of the influence of a polluted soil on the health of towns than the marked decrease which has attended the fatality of many diseases in towns where works of drainage, where improved systems of refuse-removal, and other operations which lead to the purification of the soil, have been carried out—a proof at once convincing and encouraging.

Since the second epidemic of cholera in England, each outbreak, we know, has been less fatal than the last. In 1849, after the second outburst, we find Dr. Farr reporting: "It is evident in England cholera is only severely fatal under certain known physical conditions, which admit to a great extent of remedy." Simon subsequently defined these conditions: "Excrement-sodden earth, excrement-reeking air, excrement-tainted water, these are for us the causes of cholera." Sutherland discloses auxiliary causes. "I have witnessed several outbreaks of cholera in the vicinity of graveyards," he says. "The results were most disastrous. Long-continued contact with the morbific influences proceeding from graveyards and other nuisances appeared to have produced such a degree of susceptibility, that as soon as the epidemic touched the locality, the people fell before it." He continues: "I have no doubt whatever that burial-grounds, as at present constituted, are a continual source of pestilence, slow, perhaps, in its operation, and hence overlooked by ordinary observers. They are undermining the constitutional stamina of thousands of our town populations, while people are denying they have any injurious tendency."

Farr announced the law of altitude as governing the mortality from cholera in London. He showed that in the whole kingdom the populations that suffered were nearly all dwelling on the lower alluvial soils. He accounted for the severe onslaught of the disease on the low-lying districts of the metropolis, in each of the four epidemics, by pointing to the law of gravitation, and reminding us that organised matter, cholera ferments, whether in the subsoil water or in the water companies' mains, or in the air, would sink to the lower levels. It must be admitted that it has been by the removal or mitigation of such conditions as these observers brought to light, and not by any practice of quarantine either on land or sea, that cholera in England is now almost shorn of its terrors.

Buchanan, in the masterly report previously alluded to, says, "Cholera epidemics in the towns examined appear to have been rendered practically harmless." Let, then, the idea, still so often entertained, that mere sanitary condition does not influence the progress of an epidemic—an idea, I regretted to see, gravely enunciated by one of our own profession at a recent meeting of a neighbouring sanitary authority—be for ever abandoned; let it be recognised that, if mere unhygienic conditions are not the actual destroyers in an epidemic, they it is that place the death-dealing weapon in the destroyer's hands.

All that has been said of cholera might be said with equal justice of typhoid fever, of dysentery and diarrhœa, and probably of other epidemic diseases. Buchanan has shown how typhoid fever may be reduced by proper works of drainage; and the Registrar-General has of late repeatedly called attention to the continuous decline in the mortality from this disease generally in the kingdom—a result which an analysis of the local death-rates shows to be attributable wholly to the influence of towns wherein sanitary progress has been made. Few but health officers, however, can conceive how great this reduction might be made. In my own districts, were all parts as healthy as the healthiest, I might year after year record a death-rate of 12 per 1000, and a zymotic rate of 0·0. Had I not divided these districts into several divisions and subdivisions, and compared their death-rates, I could scarcely have believed the extent to which purely local causes can influence the sickness and mortality; and were an epidemic to appear now in the South Shields Union, I believe I could indicate with tolerable accuracy the extent to which each sanitary district and subdivision would suffer.

One chief cause in determining this local excess of disease is, undoubtedly, impurity of the soil. Thus my attention was early called to one particular subdivision of my district as exhibiting a constant excess of zymotic disease, and especially of typhoid fever. There was no violent or unexpected outbreak; merely a case or two of fever occurring at most unusually frequent intervals in a locality that had suffered severely in periods of epidemics, that was acknowledged by every medical man in the town to be unhealthy, and yet one in which the property and the inhabitants were of a decent and respectable class, and where, consequently, a better state of things might have been expected. I need not enter into the details of the investigation that followed; suffice it to say that the drainage, and the water, milk, and food supplies, were proved to have had no connexion with the general unhealthiness. The system of refuse removal in operation was objectionable, and was no doubt to a certain extent the cause of sickness; but as it was the same system as that adopted in all other parts of the town, where fever was not so prevalent, some other cause had to be looked for. This cause was soon revealed—at least to my own satisfaction, and I believe to the satisfaction of the local authority and of the Local Government Board. The sites of the streets that suffered had previously been occupied by brickfields; and the excavations, still undrained, had been filled in with refuse of all descriptions—the refuse of docks, ash refuse, and even worse matter. Besides this, before the houses were erected, the sewers in the neighbourhood had burst, and the sewage had been allowed to run on this then unoccupied land, no doubt saturating it. The sewers of a part of this neighbourhood have since this time been deepened; and already, the land being better drained, there are marked signs of improvement in the health of the locality.

I have recently investigated the circumstances of another local excess of disease—circumstances that have proved equally instructive, and somewhat similar. What had once been a bight or channel, up which flowed the tidal water of the Tyne, had been filled in with a porous but pure material, the discarded ballast of ships, and built upon. The ground still had little elevation, so little as to be almost insusceptible of proper land drainage, and the ground water still stood quite close to the surface. Every house—between 200 and 300 of them—had its midden, built in the most defective possible way, and from which, from the sieve-like bottoms, soakage of foul liquids had been going on (as I had the opportunity of proving by direct observation) into the loose undrained soil. The consequence of this state of affairs is, that since I have been connected with the district, now for nearly three years, the death-rate of this locality has averaged 33·4 per 1000; the zymotic rate 6·5 per 1000 of a population of 1200; whilst in the other parts of the same sanitary subdivision, where the property is older and more dilapidated, and where, indeed, about a fourth of the remaining 700 houses have been condemned as unfit for habitation, the death-rates from all causes, and from the principal zymotic diseases, have averaged during the same period 24·8 and 4·6 per 1000 respectively.

I will confine myself to one more instance. In a sanitary district, with a population of about 8000, in a year during which there was much general disturbance of the soil owing to somewhat extensive improvements and works of sewerage, and where middens of the most offensive type, with their soakage and leakage, had long and assiduously been manuring, if I may so express it, the foundations of the town, I knew at one and the same time of nearly 200 cases of typhoid fever. And in another district, under like circumstances a few years before, I have evidence of a similar experience.

There is another disease not dissimilar from typhoid fever in its symptomatology, in its pathology, and in its etiological relations, to which I would, before closing, briefly refer—I

allude to tubercular diseases, and especially to phthisis. It has long been known, from the physiological experiments of Bergmen and others, that, by the inoculation, or by the injection into the venous system, of putrid matter or liquids, the most violent septicæmic or pyæmic inflammations may be induced in the lower animals; and this action of what Simon designates the common (as distinct from the specific) septic ferments or contagia we see only too frequently in surgical and obstetric practice. Villemin has shown again that tubercular disease is transmissible by inoculation; and Burdon-Sanderson has gone a step further, and has proved that by the experimental inoculation of the common septic ferment two sorts of inflammation may be induced: the one, as I have said, in every way analogous to pyæmia, as we know it in the human subject, the other—the less active form, induced by the inoculation of a minimal quantity of the morbific agent,—equally identical in every way with tubercular disease in man.

The conclusions to be drawn from these results are, apparently: (1) that a certain necessary attribute of all putrefactive decomposition—the common septic ferment of Simon—is a true zymotic poison, capable of producing, in the widely varying intensity of its onslaught on human life, and in the varying powers of resistance with which its onslaught is received, widely dissimilar but always disastrous effects; and (2) that tubercular disease is presumably—although this, perhaps, does not of necessity follow,—instead of a so-called constitutional disease, a form of perverted nutrition—a true zymosis, as Villemin ten years ago asserted. With these considerations, however, we have at present nothing to do, except in so far as phthisis has been proved to be intimately connected in its causation with dampness of soil. I know that authors who have commented on this discovery have appeared always to take it for granted (or so it seems to me from their remarks) that the condition of the soil proved to be productive of phthisis is the dampness, *per se*, of that soil. But I do not find that Dr. Buchanan, the discoverer of the important fact in this country, says this in any of his writings; had it been so, I should not have ventured to question the accuracy of the statement on any but the most conclusive grounds. But Dr. Buchanan is, on the contrary, guarded in his language; he is content to prove that on damp soils a high phthisical mortality prevails. But the dampness may be only the indirect cause of this great phthisical mortality of certain districts—the cause of an unventilated and consequently impure condition of the soil—the aid first to putrefactive change, and afterwards, by its watery vapour, the means by which filth ferments are lifted into the atmosphere. Would not the theory that these ferments, and not the mere undue moisture of respired air, are the proximate cause of phthisis be the one more in accordance with the knowledge derived from the pathological studies I have referred to, and, I may add, more in accordance with our experience of the production of the disease under, unhappily, every-day circumstances—for instance, in the close and filthy spots of towns and in crowded barrack-rooms?

There is much, I think, in Dr. Buchanan's report to favour such a view. Of the twenty-five towns visited by him, there were only four exceptions to the rule that a high phthisical mortality is coincident with dampness of the soil; and in each of these four districts—Dover, Eastry (including Deal), Sheppy, and Romney Marsh—the ground-water, the cause of the dampness, was, as in the case of the first two, the water of the sea, or as in the others, to use Dr. Buchanan's own phrase, "the earth itself was more of sea than land." The evaporation would be the same from the salt- as from the fresh-water, but we can understand that, both from the nature—the antiseptic nature—of the former, and also through the action of the tides—i.e., the constant change and movement,—the putrefactive changes in progress in the two soils (the one saturated with salt, the other with stagnant rain-water) would be entirely different; and thus might be explained that which Dr. Buchanan speaks of as exceptional results of his most valuable investigations.

AT the quarterly meeting of the Directors of the Naval Medical Compassionate Fund held on the 8th inst., Dr. J. W. Johnston, Inspector-General, in the chair, the sum of £100 was distributed among the various claimants. At a special meeting subsequently held, Mr. Philip Francis, of the Admiralty, was appointed secretary in lieu of Mr. G. G. Scott, resigned.

BULBAR PARALYSIS.

BY CHARLES H. ROBINSON, F.R.C.S.I.,
LECTURER ON SURGICAL AND DESCRIPTIVE ANATOMY, LEDWICH SCHOOL OF MEDICINE, ETC.

FORMERLY known as glosso-laryngeal paralysis, and subsequently as glosso-labio-laryngeal paralysis, this disease has recently been described as "bulbar paralysis," in reference to the pathological anatomy of the affection; the lesion existing in the medulla oblongata and upper part of the spinal cord, and consisting of atrophy and disappearance of certain nerve-cells, constituting the nuclei of origin of the hypoglossal, facial, spinal, accessory, and pneumogastric nerves.

In March, 1875, Mr. L——, aged fifty-seven, but looking somewhat older, first consulted me in order to obtain a medical certificate which would permit him to retire on superannuation. The only symptom he complained of at this period was what he termed "flashes of heat" at the lower part of the spine which occasionally troubled him; but he appeared to be a very healthy man, strong and well-developed. In August of the same year, some slight hesitation in speaking first began to be noticed, which gradually increased. In the following February his speech was more impaired, he spoke much slower, with longer intervals between the words; and under the date of August 30th, 1876, I find a note in my case-book, that there is paralysis of the right side of the tongue, and partial paralysis of the right arm; no pain or numbness, but the muscles of the shoulder and upper arm are somewhat wasted.

In October, the pharynx became implicated, the food occasionally lodging there, and causing spasmodic fits of coughing, and he now first complained of neuralgic pains in both arms. The following month I saw him in consultation with an eminent physician, as his friends would not believe that the affection he laboured under was incurable, and that his death was simply a matter of time. At this period I noticed that he could not protrude his tongue without pushing forward the lower jaw with his hand; the left arm was now becoming engaged, and he suffered somewhat from shooting pains somewhat similar to rheumatism. Speech was extremely indistinct, it being almost impossible to understand what he wished to communicate. The muscles of the thenar and hypothenar eminences were much wasted, and although there was no absolute loss of sensation, yet electric contractility was somewhat impaired. The lower extremities were not in any way affected, the appetite was fair, and the patient slept well. There was an increased flow of saliva, and the lower lip protruded, owing to a paralysed condition of the lower segment of the orbicularis oris, and would have been more apparent, had it not been for a luxuriant moustache and beard which partially concealed it. That there was considerable paralysis of this muscle was evidenced by the exertion required to blow out a lighted candle, which was only accomplished after several efforts. On examining the soft palate the uvula was found deflected towards the left side. The tongue was undiminished in size, and the pupils unaltered in appearance. After a time the forearms suffered, and there was loss of muscular power partially in the flexors and supinators; and early in 1877, I found he could not raise his right hand up to his chest; he could not knock at a door, put on his hat, or feed himself without bending down his head. In March of the same year, regurgitation of food through his nose occasionally took place, and he brought up an immense quantity of phlegm, pharyngeal mucus, and viscid saliva.

May 30th, 1877.—Getting weaker for the last two or three months, especially in the lower limbs. The thenar muscles being paralysed, he is obliged to place the pen or pencil between the index and middle finger, fixing the end of it against the palm of the hand; and in this way he manages to convey his wishes.

In September he got a cold, and, on examination, it was evident that the respiration and respiratory movements of the chest were sensibly diminished. The heart-sounds were weak, and there was a murmur perceptible at the base. In the early part of this month he suffered a good deal from pains at the back of the neck; and, owing to the deep muscles of the cervical region becoming affected, his head drooped forward on his chest and towards the left side, causing him considerable uneasiness, but he could not be

persuaded to adopt any mechanical means for supporting the head in the erect position.

A specimen of the urine which I examined in October was found to be muddy, of a yellowish-red colour, intensely acid, and of sp. gr. 1032. I expected that sugar would have been present, but neither Trommer's test nor liquor potassæ produced any change; heat applied cleared the urine, dissolving the lithates present. It has, however, been pointed out by Dr. Davy and others that a sample of saccharine urine may be tested for sugar, and yet no sign of it be visible; so that a negative behaviour of the test is not to be taken as evidence of an entire absence of that morbid deposit.

Early in December, 1877, he got very feeble, and, catching cold, suffered a good deal from difficulty of breathing. He was almost unable to swallow food of any kind, and I was obliged occasionally to use nutritive enemata of concentrated beef-tea with brandy. The constant dribbling of saliva and ropy mucus from the mouth was now very distressing; and, when it is remembered that he was paralysed in both arms, was unable to produce anything nearer to speech than a kind of grunt, could scarcely scrawl a line to convey his wishes, it will be acknowledged that his condition was a most unhappy and miserable one. There was, however, no incontinence of urine or fæces; warm water enemata every alternate day causing a movement of the bowels. Owing to the difficulty of breathing, he was obliged to be propped up in bed whilst sleeping. On the evening of the 12th inst. I was sent for, and found him very bad; his pulse was 150 per minute, and I did not believe he would survive the night. He slept in an arm-chair tolerably well until about 5 o'clock A.M., when he awoke, and walked for some time about the room. At 8 o'clock he scribbled the word "water," but, when offered it, could not drink; went over to a sofa, and, lying down, died quietly.

To recapitulate. The disease was first noticed in August, 1875, when the tongue became affected; upper right arm engaged in August, 1876, exactly one year after the tongue was implicated. Right side of tongue, soft palate, and upper extremity first attacked, afterwards the left side. Death took place in December, 1877, about two years and four months after the alteration in his speech had first been observed.

The tongue was undiminished in size, a very important matter, as it has been pointed out by Dr. Hammond, of New York, that in progressive muscular atrophy commencing at the tongue, that organ is marked by knots and depressions, the latter corresponding to the situation of the atrophied muscular bundles, and the former to the as yet untouched portions. The paralysis of the upper extremities in this case may either be looked upon as a gradual extension of the disease, or as an instance of progressive muscular atrophy accompanying bulbar paralysis. The first supposition I am inclined to believe is the correct one. I may add that there were no fibrillary contractions in this case, a symptom almost invariably present in Cruveilhier's disease.

The cause of the malady is obscure, and has been ascribed to syphilitic or rheumatic taint &c. In this instance the patient was in the Excise, and exposed for many years to all vicissitudes of weather.

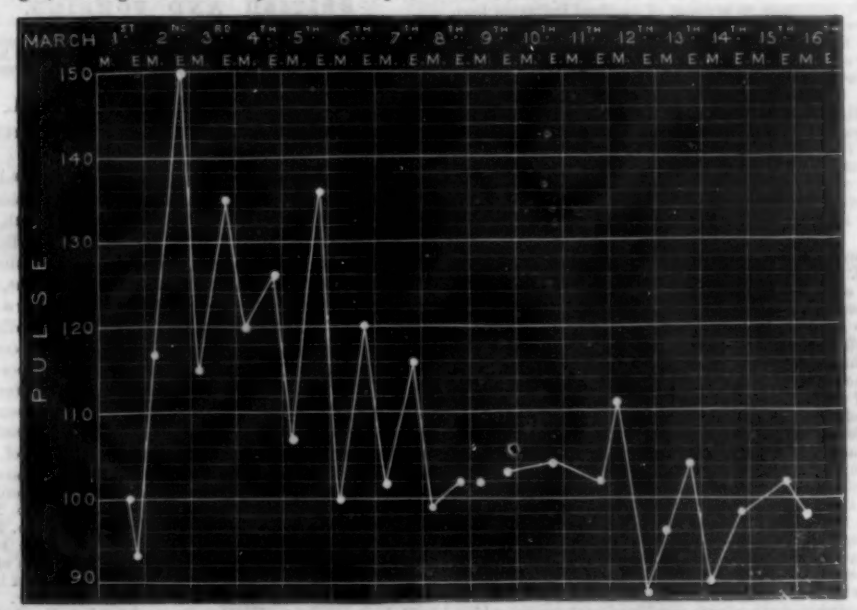
As regards the treatment pursued in this case, Easton's syrup, belladonna, chloride of barium, and cod-liver oil with phosphorus, were all employed, need I say without the slightest benefit? whilst I gave a fair trial to electricity, using the continuous current three times a week for about three months, and then discontinued it as useless.

Dublin.

WOUND OF ABDOMEN; LARGE PROTRUSION AND WOUND OF INTESTINE; RECOVERY.

By F. C. BARKER, F.R.C.S.I.,
CIVIL SURGEON.

K. S——, Mohammedan, aged about twenty-seven, cart driver, of spare habit but good constitution. Took stimulants habitually. Admitted on the 1st March, 1877, to the Kaledgi Civil Hospital, having in the early morning fallen on the horn of a bullock and sustained a wound of the abdomen about an inch and a half long and tranverse to axis of body, between the umbilicus and xiphoid cartilage, which latter could be felt on passing in the finger. About two feet of small intestine, in a scarlet and distended state, with its mesentery, protruded, and in the gut a rent existed through which a probe was passed into its interior. Three points of fine silver suture were here applied and cut close. At another part of the bowel there was an abrasion of its outer coat.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150
140
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120
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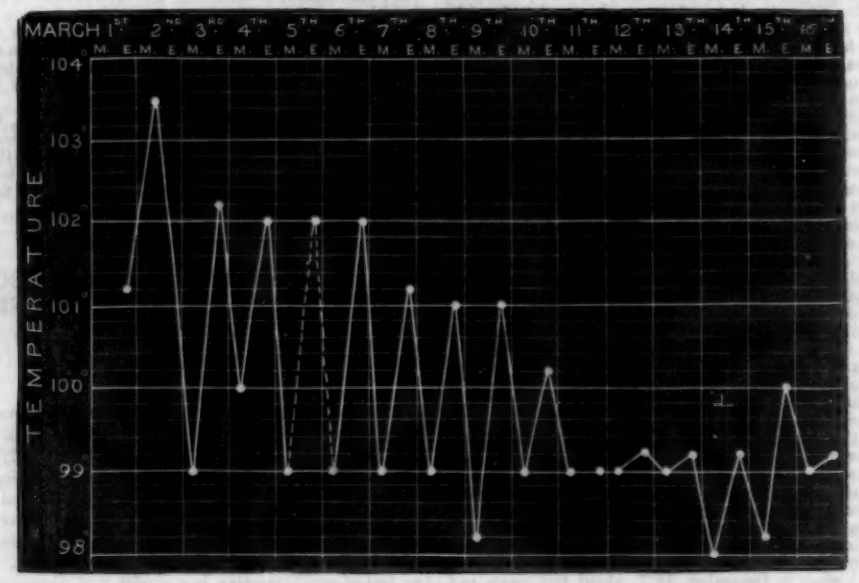
100
90
PULSE

After being washed for removal of the dust with which it was soiled, the bowel was returned (with some slight difficulty, on account of its large quantity and the smallness of the wound) by means of the forefinger of each hand alternately made to carry in small successive portions of it, and interrupted silk suture applied, covered by a wet lint pad

and cotton wadding, and a bandage over this. Pulse 85. Vomited once on completion of dressing at 10 A.M.—2 P.M.: In pain. Pulse 100. Given thirty minims of tincture of opium. On this, the first day, he had a total of opiates equivalent to eight grains of opium, which was reduced on the following day. Quinine in doses of ten, eighteen, seventeen, eleven, ten, ten, and five grains, were given on March 3rd, 4th, 5th, 6th, 7th, 8th, and 9th respectively, together with doses of brandy varying from one to four ounces daily. On the 9th, 10th, 11th, and 12th tincture of hyoscyamine was administered. The accompanying pulse and temperature charts show the remarkably regular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TEMPERATURE
104°
103°
102°
101°
100°
99
98°

periodicity of the fever which accompanied the peritonitis following the accident.

He had a loose and fetid motion on the morning of the fourth day, but nothing more was seen of the bowel sutures. The remaining treatment consisted of poppy fomentations (which greatly relieved the pain); the employment of the catheter, hyoscyamus on account of urethral irritation from the necessary repetitions of this; and the administration of abundant fluid nourishment combined with a stimulant, consisting of milk, eggs, meat, broth, and brandy.

The following is from the remarks for the sixth day:—"7 A.M.: temperature 99°. 8.30 A.M.: pulse 100, respiration 24. Has passed a free and soft, but healthy motion. Is free from pain. Abdomen tumid on right side, but soft on the left. Pulse more compressible, and first heart-sound more valvular than natural. Tongue white, moist at edges, drier, and yellowish in centre. When dozing, which he is always inclined to do, there are slight twitchings of hands and feet. Reported to have been slightly delirious during the night. On the whole, judging from present pulse, temperature and countenance last night, brandy seems to have done good. Yesterday's high state of pyrexia has given way to a softened and slower pulse, reduced temperature and number of respirations, and a tranquil face. There appears to be a periodicity in the pyrexia. Has not previously suffered from an intermittent. Keep up and improve the nourishment."

No further noticeable rise of temperature after March 16th till date of discharge except on the 21st and 22nd (on which days it reached 100°), and on the 2nd of April, when he had an attack of fever, with a rise to 104·2° in the evening, but followed by a quick return to health. Discharged, well, on the 2nd May.

His complete recovery and consequent discharge would have been at an earlier date but for a subcutaneous sinus which was left round the wound requiring treatment with potassa fusa, which resulted in a quick and satisfactory cure after separation of the slough.

At one period of his convalescence he was found to be losing flesh and strength, and it became necessary to resume a small allowance of stimulants combined with tonics, which quite restored his condition. He left the hospital well on the sixty-second day.

Surat, Bombay Presidency.

A Mirror
OF
HOSPITAL PRACTICE,
BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum, tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Proœmium.

UNIVERSITY COLLEGE HOSPITAL.

STRICTURE OF URETHRA; TEN PERINEAL FISTULÆ; HOLT'S OPERATION; CURE.

(Under the care of Mr. CHRISTOPHER HEATH.)

R. H——, aged fifty-one, a painter by occupation, was admitted Nov. 1st, 1876, and discharged Jan. 25th, 1877. He had gonorrhœa in 1851 while in India as a soldier—not a severe attack; but a fortnight after its commencement he was ordered to Bombay, a distance of 1200 miles, which he had to traverse on horseback. He was treated by a native doctor with injections and medicine. For nine months after this he had gleet, at the end of which time he had complete retention of urine, the stream having previously been narrowed. The patient went into a hospital. A catheter could not be passed. Warm baths and opiates were used until the patient became insensible, and then the water passed. He remained in hospital for ten months, at the end of which time a No. 1 catheter was introduced. Attacks resembling ague followed any attempt at catheterisation, but ceased when the catheter was passed through the stricture. Nos. 2, 3, 4, and 5 were passed, and at the end of a fortnight No. 9. He was then discharged, but every week for twelve months a catheter had to be used. In 1857 he had retention of urine again, and remained three weeks in hospital; again in 1860 and in 1862, when he was dismissed from the army. After 1862 he passed an elastic catheter for himself. In 1873 a hard lump was felt in the perineum, which burst in about ten months, and through the opening urine flowed, causing much pain. Other fistulæ have formed similarly, the urine

at the same time ceasing to flow from the meatus urinarius. There was no history of syphilis, but the patient had been a great drinker.

On admission the patient was rather emaciated. There were no abdominal symptoms. On each side of perineum and in front of anus was a fistula, with protuberant granulations at the orifice, and around the root of scrotum were seven fistulous openings. All the urine escaped through these openings, so that the patient made water when sitting, only a drop or two occasionally escaping from the meatus. The urethra behind the glans penis was indurated, and the meatus was narrow, a little purulent discharge escaping from it. There was a stricture four inches and a half down the urethra. Micturition occurred once every hour. The urine was neutral, sp. gr. 1015, and contained a trace of albumen, but no sugar.

On Nov. 4th, the temperature being normal, and the pulse 80, Mr. Heath passed No. 2 silver catheter; but at 5 o'clock next morning the patient had a rigor, and was afterwards sick. Temperature 103°. At 3.30 P.M., temperature 100°; 9.20 P.M., 99·1°.

On the 6th temperature was normal; pulse 78. The urine was turbid; sp. gr. 1012, with a trace of albumen.

On and after the 8th a little water passed through the meatus, and on the 10th the interval between the times of micturition was lengthened to three hours.

On the 13th the temperature was 98°; pulse 68. No. 3 and No. 4 catheters were passed in the afternoon. Neither the temperature nor the pulse was unfavourably affected by this.

On the 15th, at 2 P.M., Mr. Heath at his visit used Holt's dilator, the patient being under the influence of nitrous oxide gas, and No. 10 catheter was passed. After the operation, till 7 P.M., the patient perspired profusely. At 7 P.M. some urine was passed, with scalding; again, at 8 P.M.; he had a rigor lasting seven minutes, and was sick. Temperature in axilla 100·2°. At 9 P.M. had another rigor, rather more severe than preceding; temperature 102°. At 9.30 he passed water again. Temperature at midnight 100·2°.

On the 16th, at 12.30 A.M., he passed urine again. Sweating profusely. No sickness. Felt comfortable. Pulse soft. 3 A.M.: Temperature 99·6°. 10 A.M., 101°. The urine passed since the operation was acid, contained no blood, and only a trace of albumen.

On the 17th the temperature was 98·4°; pulse 84. He sweated a good deal, and complained of headache. Passed urine very frequently, without scalding. Tongue moist and dirty.

On the 18th the temperature was 98·4°; pulse 68. No headache. Tongue clean. Voided urine four times in the night.

On the 20th Mr. Heath passed a No. 10 catheter at the visit. No headache and no rigor followed. Temperature 98·4°, and patient afterwards passed a fair stream of urine per meatum. No. 10 and No. 11 catheters were introduced on the 22nd and again on the 24th. Patient had no rigors and felt well. There was no pain on micturition, which became less frequent. Temperature 98·4°.

On the 27th No. 11 silver catheter was passed and removed in fifteen minutes at the visit. At 7 P.M. patient was sick. 9.50 P.M., temperature 101°; sick again, not perspiring.

On the 29th the stream of urine from meatus was not so large as on the 21st. No. 10 catheter was passed, and again on the 30th. No. 12 was passed on Dec. 1st, and No. 11 on Dec. 4th. After the 9th a No. 11 was passed every other day. Temperature 98·4°. The streams from the perineum fell to only four.

On Dec. 11th, and again on the 12th, a No. 12 catheter was passed and left in thirty minutes, and on the 14th the patient passed No. 12 silver himself and kept it in for an hour. No. 12 passed on the 16th and again on the 18th, and kept in for an hour, as Mr. Heath found the catheter did not go easily and smoothly.

On the 21st the catheter was passed as usual, and at this time nearly all the urine came through the meatus. The patient had a very bad night, and next morning said he had had shivering sensations and pains in the limbs, though no rigors. The tongue was thickly furred. No catheter passed. At 2 P.M. he had a rigor lasting twenty minutes. Temperature 102·6°. He had some shivering on the following morning, and complained of headache.

On the 24th he had a rigor at 9.30 P.M., lasting ten minutes. Temperature 101·6°. He sweated much afterwards. It was discovered he had acute tonsillitis, from which he rapidly recovered.

On the 27th Mr. Heath passed No. 10 in the afternoon, No. 11 on the 28th, No. 12 on the 29th, and again on Jan. 2nd.

Every day, from Jan. 4th to the 8th, No. 24 French catheter was passed, and on the 10th, 11th, and 12th, No. 13 (English) bougie was passed. The urine was of normal colour, acid, sp. gr. 1020, and contained a trace of albumen.

Urine flowed rather freely from two of the fistulæ on the 13th, but there was a good stream from the meatus. On the 15th, Nos. 13 and 14 catheters were passed. From the 16th to the 22nd, No. 14 was passed every day, and kept in for an hour. From the 23rd to the 25th, Nos. 14 and 15 catheters were passed. Urine as before.

On Jan. 25th the patient was dismissed for impertinence. When seen again some time after, all the fistulæ had healed; a No. 12 was passed. The patient has been seen recently, and was then quite well.

CHILDREN'S HOSPITAL, NOTTINGHAM.

CASE OF SPINDLE-CELLED SARCOMA IN AN INFANT (FIVE MONTHS); AMPUTATION AT THE KNEE-JOINT; RECOVERY.

(Under the care of Dr. LEWIS W. MARSHALL.)

L. M. H——, an infant five months old, was admitted on Jan. 27th, 1878, with a swelling of the left leg, chiefly in the calf, although the whole limb, from the knee to the ankle, was enlarged. At a fortnight old the mother noticed a difference in size of the two limbs, which steadily increased up to the time of admission, when the measurements were respectively, 6½ in. on the sound side, and 12½ in. on the affected side. To the touch the tumour was tense, semi-fluctuating, and regular, giving the impression of a large collection of fluid beneath the calf muscles. The general health had suffered in no way, neither was there any history of previous illness or injury.

On Jan. 29th an exploratory puncture was made with an aspirator needle, which appeared to pass into a large cavity, yielding, however, no result beyond a free escape of what at first was bloody grumous fluid, and finally pure blood. The subsequent oozing was considerable, rendering the child faint and blanched, and needing ice, with pressure, to stay it. The following day a rise in temperature was recorded, and the tumour became more tense.

On Feb. 2nd, the limb was removed at the knee-joint (patella being left) by the usual method, catgut being used to secure the vessels, horsehair for drainage, and wire and horsehair alternately as sutures. The vessel at the time of operation was controlled by Esmarch's tourniquet, the bleeding being inconsiderable. As a dressing carbolic oil and lint were used, the stump being placed on a pine-wood bag.

Owing to a severe attack of erysipelas occurring on Feb. 16th, the healing process was tedious, but ultimately the flaps united and made a good firm stump.

Aug. 25th, 1878.—When seen a week ago, there was no evidence of return, and the general health was much improved.

Remarks.—Appended to this brief account of an interesting case is a full description of the tumour, supplied by Mr. W. J. Walsham and Dr. Goodhart. The former showed the leg as a recent specimen at the meeting of the Pathological Society on Feb. 5th. The chief points of interest are the early age at which the growth appeared, the successful removal of a leg at the knee-joint in so young a child, and the difficulty in diagnosis.

Description of tumour.—The tumour, which extends from just below the articular surface of the tibia to within an inch of the ankle-joint, is situated between the superficial and deep muscles of the back of the leg. The gastrocnemius and soleus are evenly spread out over the posterior surface of the tumour and the deep muscles—viz., tibialis posticus, flexor longus digitorum, and flexor longus pollicis—are stretched over its anterior or deeper surface, and can be distinctly recognised. All these muscles appear to have undergone fatty changes. The tibia and fibula are markedly flattened out, and curved, with their convexity forwards, by the pressure

of the growth, forming, as it were, a cup-shaped depression, in which the tumour, separated by posterior tibial muscles, lay. The tibia and fibula, in the middle third of the leg, are wider apart from each other than natural. The tibia in its middle third increases from its internal to its external border seven-eighths of an inch, whilst from its anterior border or spine to an opposite point on the posterior surface it measures only a quarter of an inch (the proportion between those measurements being as 7 to 2, whilst the proportion in health is as 3 to 2). The fibula measures from its external to its internal border half an inch, and from its anterior border to the middle of its posterior surface only one-eighth of an inch (by calipers). The intra-osseous space in its widest part (i.e., at junction of the middle and upper thirds) is half an inch across. The head of the tibia is also flattened from before backwards, and widened from side to side, its transverse diameter being one and a half inches, its antero-posterior half an inch. The limb is encased with a layer of adipose tissue from a quarter to half an inch in thickness. The tumour is irregularly oval, with its long axis parallel to the limb. Its circumference taken in the direction of its longest diameter is ten inches and a half; in the direction of its transverse diameter six inches and a half. Its longest diameter on section is four inches, its transverse two inches and a half. It is surrounded by a capsule of condensed cellular tissue, and appears to have enlarged by interstitial growth, not by infiltrating the surrounding muscles. On section the basis substance of the tumour is cream-white in colour, and of homogeneous or obscurely fibrous texture. In its interior, near the posterior and inner surface, is a large cyst containing a clot of blood; the cyst, of an irregular, oval shape, measures three inches in its longest, and an inch and a half in its widest diameter. Microscopically the tumour presents the characters of a well-marked spindle-celled sarcoma. It consists principally of spindle-shaped cells containing elongated staff-shaped nuclei; of free nuclei, some staff-shaped, and some round; of granular material, and of very scanty intercellular substance displaying no alveolar arrangement. From the situation of the tumour between the superficial and deep muscles, it is probable that it had its origin in the fibrous tissue forming the deep or inter-muscular fascia of the back of the leg.

EUROPEAN GENERAL HOSPITAL, BOMBAY.

LIGATURE OF THE EXTERNAL ILIAC ARTERY FOR INGUINAL ANEURISM.

(Under the care of Surgeon-Major J. PINKERTON, M.D.)

J. E——, aged forty, born in Aberdeenshire, was admitted with an inguinal aneurism of the left side on June 23rd, 1877, eleven days after arrival in Bombay. The case was at first admitted under the care of Dr. Arnott, and his notes state the aneurism was about the size of a small lime at the time of admission. The patient stated that on the voyage out from Liverpool, about three months before reaching Bombay, he was knocked down by a sea. Next day he observed a "small lump" in his groin, which gradually increased in size.

There was slight pain, but otherwise the patient was in perfect health, and had always been a healthy man. There was no arcus senilis; he had not had constitutional syphilis. He was put on half-drachm doses of iodide of potassium three times a day from date of admission to the 3rd July, when the dose was increased to forty grains, and continued, without any inconvenience, for about a month. On the 11th it was noted the aneurism was steadily increasing, and the health was good. By pressing on the external iliac only the aneurism could be emptied.

On the 23rd July digital pressure was tried and kept up by relays of apprentices. Under it the aneurism hardened. Carte's compressor was also used. On the 9th September it was noted "the patient cannot bear pressure any longer, both leg and groin painful," and the wall of the abdomen over the external iliac artery was quite red and tender where the pressure was applied. Dr. Arnott having gone to Europe on three months' leave, the patient was transferred to the care of Dr. Pinkerton.

The tumour increased after the pressure was removed, and although an operation had been determined on it was postponed on account of close sultry weather in September. The long-continued pressure had caused a marked depression in the wall of the abdomen, and the tissues were found at the operation matted together.

On Oct. 2nd Dr. Pinkerton tied the external iliac artery, the patient being under chloroform. As the tumour projected above Poupart's ligament, the incision was made a little higher than usual, extending from an inch on the inner side of the middle of Poupart's ligament to the anterior superior spine of the ilium, and measuring four inches and a half. The director could not be used without force, and when the transversalis fascia was reached, in spite of every caution, the peritoneum, which was closely adherent to the fascia, was notched. Considering the danger of using the knife, Dr. Pinkerton laid it aside, and gently tore with his fingers the transversalis fascia away from Poupart's ligament, reaching the artery after some gentle tearing of the tissues. The opening thus made in the transversalis fascia was about an inch and a half long. The edges of the wound being now held well open by Dr. Eaton and Mr. Maloney, the sheath of the artery was caught by forceps, and a very small opening made, into which the ligature was passed in the usual way and tied firmly. Pulsation ceased in the tumour immediately the ligature was applied, and did not return. The ligature was catgut, purchased from Messrs. D. S. Kemp and Co., of Bombay, and had been prepared by the Glasgow Apothecaries' Company; it was thicker than the usual silk thread, smooth, and very strong. It was at first intended to cut the ligature short off at the knot, but, fearing there would be suppuration, the ends were left hanging out of the wound, which was closed with silver-wire sutures—deep ones, an inch apart, and a shallow one between every two of the deep ones. The wound was washed with carbolised water (1 in 40), dressed with lint wrung out of the same water, covered with oiled paper, and a bandage placed over all.

Immediately after the operation the temperature of the left leg was sensibly less than that of the right. A flannel roller was put on the leg, and its position slightly raised. It was surrounded with cotton wool, and hot-water bottles placed along it. The following pill was ordered every two hours:—Half a grain of extract of opium, two grains of sulphate of quinine, with a little extract of gentian. Half an hour after the operation the temperature of the leg was about normal, and never after gave any concern. The pulse, naturally always about 60, rose to 120 by evening, and the temperature to 100·8° in the mouth.

Next day there was slight tympanites. He did not sleep well, and had no appetite. Pulse 120; temperature 102°; but both went down by evening to 96 and 99·6° respectively. There was a feeling of tenderness at the seat of the operation. The dose of opium was reduced to one-third of a grain, and at bedtime a sleeping draught of morphia was given.

On the 4th he had slept well; felt better. The dressing was removed, and the wound was seen to be united by first intention, except at two small places, one where the ligature hung out, and the other at the external angle, from which one drop of blood oozed out. No pus and hardly any swelling, and no redness. Dressed the wound with carbolised ground-nut oil (1 to 20), covered with oiled-silk and bandage. Pills omitted, and the following substituted, to be drunk *ad libitum*:—Twenty grains of salicylic acid, and twenty grains of biborate of soda, in twenty-four ounces of water. By evening the temperature was normal, and the pulse 102.

On the 5th the temperature rose to 103·2°, and fell to normal in the evening; the pulse to 102, and fell to 90.

On the 7th the dressings were taken off. The ligature came away, and the wound was all united except at the point of exit of the ligature, where there was a slight oozing of serous-like fluid. The catgut was softened and ragged, and had been absorbed at the artery. There was some redness around the sutures, no smell, no tympanites, and no pain. He slept better during the previous night than on any night since the operation. Temperature about normal. Sutures removed.

The bowels were not moved till the 10th. After the 6th, the temperature and pulse remained normal. On the 22nd the patient was walking about the hospital and quite recovered, twenty days after the operation.

It is probable the long-continued pressure had established the collateral circulation, hence the little disturbance of circulation and temperature in the leg.

The patient left for Europe, and up to the time of departure the hardened tumour was the size of a small orange. The small cut in the peritoneum was left alone; it was probably not more than a quarter of an inch in length.

Medical Societies.

PATHOLOGICAL SOCIETY OF LONDON.

Stenosis of Pulmonary Artery.—Osteoid Tumour of Upper Jaw.—Molluscum Contagiosum.—Non-congenital Lymphangiectodes—Multiple Sarcoma.—Rodent Ulcer.

THE ordinary meeting of this Society was held on the 15th inst.; Dr. Murchison, President, in the chair. The chief specimens shown related to diseases of the skin, Drs. Tilbury and T. C. Fox dealing with the history of molluscum contagiosum and with a case of lymphangiectodes, and Dr. Thin detailing his researches into rodent ulcer, which he believes to take its origin in the sweat-glands.

The President opened the proceedings by laying on the table the new volume (the 24th) of the Society's Transactions.

Dr. PEACOCK exhibited a specimen of Stenosis of the Pulmonary Artery from disease of the valves, probably congenital. The patient was a boy thirteen years of age, who was said to have never been strong, and to have always been livid, but who was in fair health up to four months before his admission into hospital, when he began to suffer from dyspnœa and increased lividity. There was a loud double murmur over the pulmonary cartilage, and a distinct thrill. The patient dying, after suffering from dropsy, &c., the heart was found to weigh 9oz., the right ventricle to be dilated and hypertrophied, and the orifice of the pulmonary artery narrowed and funnel-shaped, as from adhesion of the valves, the circumference of the orifice being about four-fifths of an inch. Dr. Peacock thought the disease to be congenital. At the time of birth it must have been slight, or else one or both of the fœtal passages would have remained pervious.—Dr. D. POWELL asked whether the analogous condition of the mitral valve was also congenital. Many cases of pure mitral stenosis are met with in which no previous history of rheumatism is present, and where the only explanation is that they are congenital in origin. Such patients live long, there being often no regurgitation.—Dr. PEACOCK had long regarded a number of these cases as congenital. Burns, of Glasgow, had pointed this out, and so had Farre, and Dr. Peacock himself had frequently seen cases of children who had been ailing all their lives, and who had evidence of mitral constriction. He agreed with Dr. Powell that very often cases of presystolic murmur were met with without any previous rheumatic history.—The PRESIDENT said that a year ago he saw a patient, twenty-five years of age, with presystolic murmur, and who was known to have had it when two years old, and yet during the whole time he had shown no symptoms of heart disease.

Mr. EDWARDS, of Croydon, showed a specimen of Osteoid Tumour of the Superior Maxilla, which he had removed from a young woman, twenty-one years of age, whose general health was good. It had existed as long as she could remember, and there was a history of her having struck the right cheek when three years old. The growth of the tumour had been very slow, gradually filling the right antrum until it implicated the whole of the right superior maxilla. In its removal a small portion of the growth extending to the hard palate on the opposite side was left behind, but there had been no recurrence. The case was a rare one; the only instance he could find at all like it was one reported by Mr. Bryant in Guy's Hospital Reports.—Mr. BRYANT said his was a case of a girl eight years of age, and the tumour had grown for some time. At first it was thought to be due to a misplaced tooth; its growth was not arrested on removal of the tooth, but rather increased. Accordingly Mr. Bryant excised the growth, which was found to be densely osseous, but containing myeloid cells. An interesting point was the subsequent subsidence of a portion of the tumour which had to be left behind, and there had been no recurrence. It was possible that this "solid myeloid" was started by temporary irritation in connexion with the teeth.—Mr. HULKE inquired what was the finer structure of the specimen exhibited.—Dr. GOODHART, who had examined it, said that in the fresh state it yielded a large number of myeloid elements, and there was no doubt that it was, like Mr. Bryant's case, an instance of a myeloid developing into bone. He suggested the possible relationship between such cases and the class of leontine disease of the bones of the face. The extension of the growth to the hard palate was suggestive of the idea that if left alone it might have led to a gradual generalised hypertrophy of the maxillary bones.

Drs. TILBURY FOX and THOMAS C. FOX communicated their researches upon the Minute Anatomy of Molluscum Contagiosum, in which they have fully satisfied themselves that the view so long held in England of the glandular origin of the affection is the correct one, in opposition to the recent writings of Lukomsky, Boeck, and others, who affirm that the little tumours are produced by a growing downwards of the rete Malpighii in cone-like processes into the corium, and that the cells undergo degenerative changes, and give rise to the so-called "mollusc bodies." Such downward growth cannot be seen; but, on the contrary, the specimens exhibited showed a flattening and thinning of the rete over the growing molluscum tumour. The disease begins with a hypertrophic growth of the sebaceous gland in which the lobules become multiplied and their cells greatly increased, and transitional stages can be traced between that condition and the fully developed molluscum tumours. Lukomsky and Boeck do not seem to have observed the earliest stage of the disease. The changes that go on in the cells of the tumours consist in the rapid endogenous formation of "schleim-cells," preceded by great activity of the nuclei. This is seen especially in the outermost layer of cells, and free vacuolation takes place in all these cells as they advance towards the centre of the acini and to the excretory duct. The so-called "mollusc bodies" are nothing more than these completely vacuolated cells which have undergone some peculiar transformation of the normal sebum. In the expressed contents of molluscum are observed cuticular cells like those of comedo, and "mollusc bodies"—i.e., altered gland-cells. The latter are seen now and then to be imbedded in the cuticular cells, which often exhibit moulds from which the mollusc-bodies have dropped. Lastly, they have never found any fungus elements in any fresh tumour, but have seen plenty of fatty granules, altered blood-cells, and oil-globules—which might easily be mistaken for fungi, whilst the irregular edges of the cuticular cells sometimes present an appearance like mycelium.—In reply to the President, Dr. Tilbury Fox said they had not entered into the question of the contagiousness of the disease.

Drs. TILBURY FOX and THOMAS C. FOX also showed a patient suffering from Lymphangiectodes, and specimens illustrating its minute anatomy. The patient was a young man twenty-one years of age, who had been under Dr. Tilbury Fox's care since June. He was born in the Mauritius, of English parents, but when six years old came to England. The patient was born with two large nævi (port-wine stains) on the left thigh, which have persisted unchanged till the present time. When six months old the veins of the left thigh, and especially of the calf, began to enlarge, and a few prominent varicosities and one very marked cavern were formed. It was not until he was two years old that the lymphatic eruption appeared. This was confined to the *back* of the left leg and the perineal region. It showed itself as little pin-point, warty-looking prominences on areas quite free from any nævus condition, and they gradually enlarged and became aggregated, forming areas, the largest of which was three or four inches square and half an inch high. When these "warts" were closely examined, they were seen each to contain a little vesicle, which when pricked exuded a little clear, watery, albuminous fluid, containg a few lymph-corpuscles, but no blood elements. No enlarged glands were found, and these vesicular growths were not reducible by pressure. The patient had several attacks of low fever, lasting for some months, about the time fresh vesicles were making their appearance; and whilst in the hospital he experienced a sudden attack of lymphatic inflammation of the foot, which as quickly subsided. The limb, it should be stated, is hypertrophied to an extremely slight extent. With the patient's consent, portions of skin were removed, the following being the conditions found: All the parts of the skin were increased—viz., the epidermis, the rete considerably, with great overgrowth of the interpapillary parts forming the warty element, and the fibrous connective tissue. There was no lipomatous overgrowth, and the glands and hair were especially well marked, but not involved in the disease. The interesting points found were,

firstly, that the veins were very greatly increased in number, and formed networks in all directions, but they were always distinctly tubular-walled; and secondly, that the lymphatics were immensely dilated, and the reticular juice-tracts greatly increased and very prominent. The lymphatics appeared as distinct hyaline tubes, varicose or dilated in cavities of all shapes, and also as slits and gaps in the tissue, but lined throughout by delicate endothelium. This system of canals was quite distinct from the veins, which had well marked walls, and the two systems had no direct communication. These lymphatic tubes were dilated in the enlarged papillæ into great cysts, which contained lymph-corpuscles (not blood), and which represented the vesicles seen on the surface imbedded in the papillæ. The authors consider that the case belongs to the class called by Kaposi, Lymphangiectodes, and by Virchow, Elephantiasis teleangectodes, and they referred to a number of cases lately collected by Dr. Busey in his work on "Lymph Channels." There are some remarkable features about the case, however, both clinical and pathological. Whereas these cases are generally congenital, and associated with enormous elephantoid hypertrophy and other monstrosities, in this case the nævoid growths alone were congenital; the patient was of a very nervous, delicate constitution and stuttered badly, but was otherwise of healthy development, and the usual great hypertrophy was represented only by a slight hyperplasia of the several skin textures. The vesicles were not reducible, as in lymphatic varices, because entrapped, as it were, in the papillæ by the connective tissue overgrowth, and there was no discharge of chylous fluid, as in cases recorded of simple lymphangiectasis and lymphorrhœa, but neither was there in other cases which approach this in nature.—In reply to the President, Dr. T. FOX said the urine was healthy.—Dr. HOGGAN having recently worked largely at the histology of lymphatics, said that the specimens shown were undoubtedly a disease of the lymphatic system. He had observed in some of them a vesiculation in the epithelial cells.—In reply to Mr. Morrant Baker, Dr. FOX said the fluid escaping from the vesicles was of a gummy nature, containing lymph-corpuscles; it was not chylous.—Mr. HULKE said that if the vesicles could not be emptied by pressure, how could they be in communication with the lymphatic spaces beneath?—Mr. BRYANT, having just examined the patient, would be inclined to regard the case as one of nævus undergoing vesicular degeneration, although the case was one of very extensive character. He had brought a similar case of large nævus, which had undergone widespread degeneration, before the Society about fifteen years ago.—Dr. THIN had very little doubt that the specimens showed lymphatic vessels and spaces, but did not think that fact sufficient to prove the lymphatic origin of the disease. Might not the same appearances be produced in œdematous connective tissue where there was a constant venous stasis and exudation from the bloodvessels into the connective tissue?—Mr. HUTCHINSON did not think the case resembled the others he had lately seen, one of which Dr. Fox had compared with the present case, which he (Mr. Hutchinson) thought was an instance of change occurring in nævus. In the two cases referred to, the eruption, which was of a warty and vesicular character, occurred in children showing no congenital defects. He proposed to bring the cases before the Society.—Dr. FOX was surprised that the lymphatic nature of the affection had not been recognised. The warty and vesicular condition was a primary condition, and its association with the nævus was accidental, for it could be traced arising in portions of skin not attacked by the nævoid condition.

Mr. BUTLIN related the sequel of a case of Multiple Sarcomata, reported by him about a year ago (THE LANCET, vol. ii. 1877, p. 844). The patient, a boy twelve years of age, who was then shown to the Society, died in August. The day after he was exhibited Mr. Holden removed a tumour from the front part of the chest, and also one from the back. They had the same histological characters as those previously removed. There was recurrence of the growths, and the appearance of others, a small tumour in the right arm rapidly growing, enlargement of axillary glands, and of a chain of glands along the lower border of the pectoral muscle. All the tumours, with the exception of that of the right testis, increased in size. At the post-mortem examination, in addition to the growths on the surface and in axilla, the pelvic glands were largely infiltrated, especially those of the right side, where they had caused ulceration of the bowel. Mr. Butlin held that the appearance of the growths in different parts was due to separate outbreaks of the disease. The repeated recurrence *in situ* could not be attributed to incomplete removal, for at each succeeding operation more care was taken to remove all the diseased tissues. When he was shown to the Society there was no implication of the lymphatic glands; and had he lived longer, probably his internal organs would have become affected. It was rare for tumours of this nature to diminish in size, as that of the right testis undoubtedly did; possibly an explanation might be found in the great enlargement of the pelvic lymphatic glands on that side; they may, as it were, have carried off the disease from the testicle.

Dr. THIN showed specimens illustrative of the Histology of Rodent Ulcer. He remarked that the two cases he now brought before the Society were to be taken in connexion with two cases he had reported on last session. The first of these was a large ulcer over the scapula, in a woman, removed by Sir James Paget. As the mere naked-eye appearances were not at the time considered sufficient to settle whether the case was one of rodent ulcer or epithelioma, he had in his account of it simply termed it a cancerous ulcer. The second was an ulcer of the scalp, diagnosed by Mr. Morrant Baker as rodent ulcer, and excised by him. These cases were histologically identical with the two cases of rodent ulcer now to be described, and that they were both cases of this variety of cancer is therefore established. In the first of the two fresh cases a wart had, in the course of four years, developed into an ulcer one inch by half an inch on the side of the nose and adjacent part of the cheek. It was fissured close by the ala nasi, being covered elsewhere by a dark-green irregular scab. Beneath the scab it was of a deep red colour. Its outer border was nodulated. At its upper border there was thin red scar-tissue. There was some, but not much, induration about the base. The patient, a woman aged fifty-four, was under Mr. Morrant Baker's care at St. Bartholomew's Hospital. Mr. Baker excised the ulcer, and the wound healed rapidly. The other case, that of a man aged forty-one, was a patient of Mr. Lister's. When he was seventeen years old a sore was noticed at the side of the left nostril. There was a pimple, which he scratched. It did not disappear, but remained very small till ten years ago, when it began to spread. It was then about one-eighth of an inch in diameter. In 1869 it began to make its way round the nostril into the nose, and was cauterised. A small sore remained afterwards, and broke out at intervals. Hardness was first noticed eighteen months ago, and communication with the mouth took place three months ago. The tumour, which involved the side of the nose and upper lip, was excised by Mr. Lister, as was also a separate nodule in the upper lip, which did not affect the skin, and was not ulcerated. Microscopic examination showed that in all the four cases there were the same characteristic appearances. In rodent ulcer the primary and chief feature is an epithelial growth of new formation. The cells which compose this growth, and the groups which they form, differ essentially from those which are seen in cases of epithelioma, which begin by a growth of the rete mucosum. The cells are small, have a relatively large nucleus, and are, with the exception of the border cells of the groups, of nearly uniform size. In all the cell groups the border cells have a tendency to assume the columnar form. In the centre of the large groups the cells soften and disintegrate, but they never enlarge, nor form laminated capsules or cell-nests, nor undergo horny degeneration. There are no prickle cells found amongst them. The cell-protoplasm is scant, and resists hardening agents so badly that a cell group is usually seen as a granular mass with nuclei imbedded in it. The difference in nature between these cells and the cells of the rete mucosum is brought out in a striking manner by a double staining with eosin and logwood, eosin staining the epidermis deeply, but scarcely affecting the cells of the morbid growth, which on the other hand stain deeply in logwood. The tendency of the new cells is to grow in long bud-like cylindrical masses, which insinuate themselves in the pre-existing interstices of the tissues. Where the growth meets with little resistance these cell-masses coalesce and form large spherical and ovoid masses, which break down in the centre. The luxuriant growth upwards of these masses in the papillary layer until they touch the epidermis cuts off the vascular supply and produces ulceration. Whether these cell-masses produced the alveolar variety of Thiersch or his tubular variety is accidental. In Mr. Lister's case the alveolar variety was

represented in the nose, and in the submucous tissue of the upper lip, whilst the hard nodule in the upper lip to which the cell-infection could be directly traced from the submucous alveolar masses was composed of the tubular variety. Both in the narrow tubular masses and in the large alveolar masses Dr. Thin had recognised and been able to isolate a membrana propria. (Thiersch had found no membrana propria). With regard to the source of the new epithelial growth, he had been unable to find in any of the four cases that it communicated directly with the rete mucosum, sebaceous glands, or hair-follicles. Where it came in contact with those structures it could still be distinguished from them, eosin being here specially useful. In Sir James Paget's case and in Mr. Morrant Baker's second case he had, however, found some sweat-glands the seat of new growth; and, although he had not traced this new growth into unbroken continuity with the cell-masses, he believed it pointed to the disease being an adenoma of the sweat-glands. He quoted cases from Verneuil and Thiersch, in which he believed the drawings bore out this view. He was unable to satisfy himself that the drawings in Thiersch's "Atlas" bore out the interpretation put upon them by that author, that the cell-growth began in the sebaceous glands. Mr. Hulke had not found any new growth from the rete mucosum or sebaceous glands. Dr. Collins Warren had described cell-nests and large epidermic cells in rodent ulcer. Dr. Thin had not found similar appearances, and was forced to believe that Dr. Warren had confounded with them remnants of hair-follicles or other epidermic elements which had not been completely destroyed.—Mr. BUTLIN, who had seen three of the cases referred to by Dr. Thin, was not prepared to admit that the third was an instance of rodent ulcer rather than epithelioma. It had more the aspect of the latter during life, and his own specimens of it showed thickening and downgrowth of the rete mucosum, and the formation of cell-nests. —Dr. SANGSTER, in examining a nodule from the neighbourhood of the rodent ulcer, found its characters to be quite like those described by Dr. Thin in the early stage of rodent ulcer. The rete Malpighii, instead of being overgrown, was atrophied by the pressure of the new growth below it, this growth appearing to arise in the sweat-glands, the lamina and margin of which were obscured by proliferating cells.—Mr. M. BAKER said that Dr. Thin had established microscopically the distinctions which surgeons had long made clinically between rodent ulcer and epithelioma. If he was not mistaken, Dr. Thin at first thought all rodent ulcers were epithelial cancers, but his investigations had led him to the opposite view.

The meeting then adjourned.

CLINICAL SOCIETY OF LONDON.

Injury to Arm, with Loss of Conductivity in Radial and Median Nerves.—Suprapubic Lithotomy.—Pistol-shot Wound of Skull.

THE first meeting of this Society after the recess was held on the 11th instant, the President, Mr. G. Callender, F.R.S., in the chair. Three papers of considerable surgical interest were read: one by Mr. Hulke, of complete recovery from a severe injury to the arm, with restoration of nerve-power, temporarily suspended, by the stretching of the median and radial nerves; one by Mr. Hutchinson, on a case of suprapubic lithotomy for the extraction of a calculus of unusual size; and, lastly, one by Mr. Clement Lucas, of a pistol-shot wound of the forehead, followed by death from meningitis. The discussion on this paper led to several cases being cited of recovery after severe gunshot injuries of the head, or after considerable destruction of brain-substance.

The eleventh volume of the Transactions was laid on the table by the President, who took the opportunity of thanking the secretaries for their labour in its preparation.

Mr. HULKE read notes of a Case of Fracture of both Humeri; Rupture of the Left Brachial Artery; Loss of Conductivity of Median and Radial Nerves of the Left Arm, and other injuries; Recovery, with complete Restoration of Nerve-function. The patient, a silver-polisher, was brought to the Middlesex Hospital for severe injuries inflicted by machinery. There was a comminuted fracture of the left humerus at its lower third, considerable swelling of the lower half of arm and upper half of forearm, and purplish discoloration of the lower half of forearm. No pulse could be felt at the wrist; but the brachial artery pulsated at middle of arm. On inner side of arm was a small wound, from which venous blood was oozing. The area of distribution of the median and radial nerves was found to be wholly anæsthetic. There was also fracture of the right humerus, and of one or more of the middle ribs near their angles; also fracture of both ilia, wounds in the left thigh, with laceration of the tendon of the quadriceps extensor muscle. On the third day after the receipt of the injury, the pulse could be felt at the left wrist. The patient kept his bed for six weeks, and at the end of another fortnight left the hospital. The anæsthesia of the hand and fingers continued for some time, but sensation has gradually returned, and is now perfect. Flexion of the left elbow is checked at an angle of 90 degrees. (The patient was shown to the Society.) Mr. Hulke remarked that the suspension of conductivity in the median and radial nerves was due probably to those nerves being over-stretched but not completely torn through. The case also showed the facility with which collateral circulation was re-established in the upper limb, and the small risk there was of further hæmorrhage when the vessel was completely torn through—a fact which led him *not* to amputate the arm. The man's abstemiousness and good general health no doubt favoured his recovery.—The PRESIDENT said, with reference to the effect produced by the stretching of the nerves, that in a somewhat similar case under the care of the late Mr. Holmes Coote, in which a child had sustained fracture of the humerus or compound dislocation of the elbow, it was evident that the median nerve was stretched over the broken bones. The result was not so satisfactory as in Mr. Hulke's case, for the parts supplied by the nerve never recovered sensibility, and considerable sloughing took place from the loss of nerve-supply. It was very difficult to measure the precise amount of stretching a nerve could sustain without impairment of its conductivity.—Mr. HEATH thought the return of collateral circulation after injury to the artery to be rapid, although in a case of gunshot wound of the arm which he had reported (Clinical Society's Transactions, vol. ix.), where the evidence of division of the brachial artery was even clearer than in Mr. Hulke's case, pulsation could be felt in the ulnar and radial arteries three days after the injury. In that case Dr. Poore reported upon the electrical condition of the limb, and found that, although the ulnar nerve recovered, the median remained permanently damaged. He had lost sight of the man, and could not say what his present condition was. He inquired if the wound was treated on antiseptic principles.—Mr. MARSH pointed out that age was an element in the rapid establishment of collateral circulation. He had known it effected within twenty-four hours in young children.—The PRESIDENT said, although in the present case there could be no doubt that the recurrence of sensibility was due to recovery of the nerve-trunks, yet in some cases, as Weir Mitchell had shown, it would appear that even after permanent injury to a nerve-trunk, sensibility was often restored through other nerve-channels in communication with the branches of the injured nerve.—Mr. HULKE had no doubt that the conductivity of the damaged nerve was restored, and that the return of sensation in this case was not due to any compensatory ingrowth of the nerve-supply. A more striking case, exemplifying the rapidity with which collateral circulation was established in the upper extremity, came under his notice some five or six years ago. The patient, an epileptic youth, nineteen years of age, fell through a window in a fit, cutting across the arm down to the elbow. A compress was applied, the limb bandaged, and the youth taken home. Next day he was brought to the Middlesex Hospital, and the forearm and hand were found to be almost black and cold. There was a gaping wound at the bend of the elbow, laying bare the brachial artery, which was completely severed. On removing a pad which had been wedged tightly into the wound, evident pulsation was seen in the distal end of the divided vessel. Thus, within twenty-four hours, and under most adverse circumstances, collateral circulation had been set up. The treatment of the injury in the case he had related was based on scrupulous cleanliness, but the circumstances of his clinique did not enable him to carry out the antiseptic system in all its details.

Mr. HUTCHINSON related particulars of a case of Suprapubic Lithotomy for a large stone—the only case that had

come under his personal notice. The patient was a man twenty-six years of age, who had suffered no inconvenience until six months before admission, when he began to have frequent and painful micturition and hæmaturia. On sounding, a stone of large size was detected, and it could also be felt by the rectum. The bladder was very irritable, and the urine contained pus and blood. The man was also much emaciated. It was evident that it could not be removed by the ordinary operation, and on consultation with Messrs. Curling and Luke the question as to its removal through the rectum or by the high operation was raised, and it was eventually decided to perform the latter. No special difficulty arose in the operation except in the extraction of the calculus, and the bladder was drained by means of an india-rubber tube passed through a catheter into the bladder. This was not very effectual, and, in spite of many other devices, the urine could not be prevented from welling over the edge of the wound. The case did well for the first week, when pyæmic symptoms set in and the patient sank. At the post-mortem examination the bladder was found contracted and rigid from a thick phosphatic deposit lining its interior. The ureters were dilated, and there was suppurative nephritis and pyæmic deposits in the liver and lungs. The case showed the facility with which the high operation could be performed, but also the difficulty of keeping the bladder empty after the operation. This would not have happened if the rectal operation had been performed, but the occurrence of fistula was a drawback to that procedure. The stone, composed of lithic acid, weighed six ounces and a quarter, and its circumference measured nine inches in one direction and seven in another. Mr. Hutchinson exhibited the stone, and also the cast of another, about a quarter of an ounce heavier, which had been extracted by the late Mr. J. Adams by the lateral operation, and after severe traction. That case did well. For stones of usual size the lateral operation was no doubt preferable.—Mr. NORTON suggested that, in cases of the high operation, the bladder might be drained by an incision into the urethra and through the prostate in the perineum.—Mr. GANT thought the bilateral operation of Dupuytren preferable to the high operation, and sufficient for the extraction even of large stones.—Mr. HEATH remembered seeing Sir H. Thompson perform the suprapubic operation some years ago in the case of a boy with deformed pelvis and a calculus too large for extraction by the perineum. Mr. Erichsen had previously tried extraction, but failed. Mr. Heath had also, of late years, seen Sir Henry perform suprapubic puncture of the bladder in cases of prostatic disease. It was not always easy, and he would like to know if Mr. Hutchinson experienced any difficulty from the bladder being contracted. He had recently read how, by distending the rectum, the bladder could be pushed upwards and forwards so as to appear above the pubes; but he had not personally confirmed that statement, which was based on experiments on the dead subject. For drainage of the bladder he was in the habit of performing recto-vesical puncture in cases of hopeless injury to the spine, thereby saving all the trouble of passing a catheter in a paraplegic subject. As to the extraction of large calculi, it was well known that quite lately a successful case of extraction, per perineum, of a stone weighing six ounces had occurred. He agreed with Mr. Teevan in urging that free division of tissues by the knife was preferable to their laceration in a forcible extraction. Such cases were suitable for the method carried out by Mr. Macnamara in India—viz., of first performing lithotrity, and then extracting the fragments by lithotomy. "Perineal lithotrity" has been advocated by a French surgeon.—Mr. HULKE did not think it necessary that the bladder should be punctured through the perineum or rectum in cases of suprapubic lithotomy, for it would appear that the only object in keeping the bladder dry was to obviate the annoyance to the patient of the dribbling of urine, and not because there was much risk of extravasation or cellulitis. The writer of the article on the subject of lithotomy in Pitha and Billroth's Surgery says that in his earlier suprapubic operations he was apprehensive of ill results from this source, and devised methods to obviate it, but finding that, as a matter of fact, the only inconvenience suffered from the overflow of urine through the incision was slight sloughing of the margins of the wound, he ceased seeking to prevent it. With reference to the procedure of breaking up a stone through the perineal wound, Mr. Hulke said that at the Exhibition of 1862 several instruments intended for this purpose were shown. One was particularly ingenious. It was the invention of an Italian, and consisted in a cup-shaped blade or scoop, something like the female blade of the lithotrite, which received the stone, whilst a long drill was passed up the tube, and as soon as a hole of small depth had been drilled, the stone could be broken up by a slight tap against a steel rod which was passed down into the drill-hole. It was remarkable how little force was thus necessary to break up hard stones.—Mr. BARKER had recently seen Sir H. Thompson perform the high operation, when the greatest difficulty was experienced in reaching the stone, and was only finally effected by Sir Henry grasping the stone with a lithotrite and directing it towards the wound.—The PRESIDENT intended to bring some cases before the Society, in which he had performed suprapubic puncture of the bladder, and in one of these cases there was certainly some difficulty in reaching the bladder, nor was anything gained by pressure on the bladder through the rectum. To obviate the trouble of urine welling up through the wound (which might be avoided by placing the patient in the prone position) he had used a catheter as a syphon. At first he had found this to fail, owing to the blocking of the catheter, but when, instead of one perforation, several holes were made in the sides of the instrument, no further difficulty arose, as all the apertures did not get blocked. In his own case of suprapubic lithotomy the urine was drawn off by the urethra.—Mr. HUTCHINSON, in reply, said that every form of syphon action was tried and failed, and if holes were made in the tube above the extremity surely air would be admitted, and the syphon fail.—Mr. CALLENDER said that the bladder contracted round the instrument.—Mr. HUTCHINSON remarked that the bladder in his case was rigid from phosphatic deposit. No difficulty was experienced in any step of the operation, except perhaps in the extraction, which was effected by means of lithotomy forceps. The ill result was to be attributed to the patient's low state of health at the time. Other operations were discussed at the time, and he doubted whether the bilateral operation could have been done without an undue amount of laceration, and, although the stone might have been extracted through the rectum, there was the drawback of a fistula resulting from that operation.

Mr. R. CLEMENT LUCAS read notes of a case of Pistol-shot Wound of the Skull. A young man, twenty-one years of age, shot himself with a revolver in a police-cell on Feb. 2nd, 1878. Five of the chambers of the revolver had been discharged, but two only of the charges had been directed against his head. He was brought to Guy's Hospital in a semi-conscious state, when about the centre of the forehead were seen two small holes close together, with slightly inverted edges, and but little blackening of surrounding skin. When Mr. Lucas saw him he had recovered consciousness, but had some bleeding from the nose. Chloroform was administered, and a crucial incision made over the wounds, displaying a blackened cavity beneath the skin, and at the bottom of this cavity was a reniform aperture in the frontal bone, and lying far back, on what proved to be the indriven inner table, were the two flattened bullets. These were extracted, as well as fragments of the diploe and outer table, and then, on raising the fragments of the inner table, the dura mater was exposed on either side of the longitudinal sinus; it was pulsating, and at one part a small puncture was seen in the membrane. The upper part of the wound was brought together with sutures. The patient complained of great pain at the back of the neck, and in the evening the temperature rose to 99·8°. Next day the pain in neck persisted; temperature 100·2° to 102·1°. On Feb. 5th there was great swelling of eyelids; towards evening he became drowsy and semi-conscious; the temperature was 102·4°; pulse 100; and respiration 25. On Feb. 6th he was unconscious and restless; had an attack of general convulsions in the night, after which rigidity of the left leg was noticed. Later this gave way to flaccidity of the left limbs and rigidity of right arm. The temperature continued to rise till, on the evening of the 7th, it reached 108·6° (rectum). Temporary reduction in the temperature was effected by a bath cooled from 90° to 73°, but the temperature again rose, and he died early in the morning of Feb. 8th. At the necropsy, an aperture measuring one inch by half an inch was found in the frontal bone just above the sinuses; the inner table was seen to be fractured and depressed, and a small rent had been made in the dura mater. There was suppurative meningitis on the surface of the right hemisphere and the anterior part of the left, and slight bruising of the cortical

substance of the anterior part of each frontal lobe. Mr. Lucas remarked that had the bullet been directed a little more to the middle line the dura mater might have been spared, and the man might have recovered, for the small wound in the membrane was, no doubt, the cause of the fatal meningitis.—Mr. HUTCHINSON said that he had observed hemiplegia to occur in meningitis of the convexity of the opposite side now sufficiently often to believe the paralysis to be an important diagnostic sign. Dr. Sutton had suggested to him that in all such cases there must be an encephalitis in addition to the meningitis, and in one case, examined microscopically, this was found to be so. Was the cerebral substance examined microscopically in Mr. Lucas's case?—Mr. HULKE, many years ago, had seen a large number of gunshot wounds of the skull, but did not recollect any instance of survival when the bullet had actually lodged in the skull. One of the most remarkable instances of recovery he saw a few years ago at the Middlesex Hospital in a young man, who was under the care of Mr. G. Lawson. This patient had extemporised a pistol out of an iron gaspipe, filled it with powder and a plug of lead, and discharged it at his forehead. Certainly no one thought he would survive. There was a large ragged wound in the forehead, at the bottom of which blood-clot mingled with brain-matter was seen. A great plug of lead was extracted by Mr. Lawson, as well as a considerable portion of the frontal sinus and fragments of the ethmoid bone. In spite of such desperate injuries, the man recovered. He could confirm Mr. Hutchinson's statement as to the occurrence of hemiplegia in one-sided meningitis.—Mr. HEATH, six months ago, saw a gentleman who was totally blind, and who was said to have become so after having fired a pistol at one side of his head. There was no evidence of a bullet at the spot where the mark was, but on the opposite side, under the temporal muscle, was a prominence which felt like a foreign body. This might have been the bullet or a piece of displaced bone, but certainly the ophthalmic surgeon (whom he had first consulted) thought the blindness due to division of both optic nerves, the third nerve on one side and the sixth on the other being also apparently severed. Mr. Heath concurred in this view, although it was remarkable that the carotid artery should have escaped. In another case, in which a man shot himself in the temple, the bullet rebounded into the brain from the inner table of the opposite side of the skull.—Mr. BARKER related two cases of bullet-wound in the frontal region. In one a Chassepot ball penetrated three-quarters of an inch; death took place some months after from convulsions. In another the ball traversed the orbit, fracturing the malar bone, and was cut out above the molar tooth on the opposite side.—Mr. HULKE said that in Larrey's Memoirs is the record of a man who was shot through one temporal region. Larrey passed a catheter through the wound and through the track of the bullet in the brain, and discovered the bullet on the opposite side; he trephined over the spot, extracted the ball, and the man recovered.—Mr. HOWSE had recently trephined over the skull to cut out a bullet. A child was shot by a revolver presented at one side of, but not close to, the forehead. There was a ragged wound of entrance on one side, but no aperture of exit. However, he thought he detected some irregularity of bone in the skull exactly opposite to the wound, and, on cutting down over this spot, found the bone fractured, and, trephining, extracted the bullet, which was lodged between the dura mater and the bone. The child survived thirty-six hours.—Mr. HUTCHINSON said that in the Leeds Museum there was preserved the skull of a young woman with a bullet resting against the inner angle of the sphenoidal fissure. This was quite a post-mortem discovery. She was not known to have ever been shot, and her death was from fever.—The PRESIDENT remarked upon the very great injury which the brain might sustain without ill results, and he was fast coming to the opinion that the grey matter could be dealt with surgically, like any other tissue, and, if care be taken to remove all *débris*, wounds of brain-substance would readily heal up. He had lately under his care a lad who had sustained compound fracture of the parietal bone in a machinery accident. Much brain-substance protruded from the wound. He (Mr. Callender) scooped out with his finger as much of the damaged nerve-substance he could, and washed out the remainder with solution of carbolic acid (1 in 20). In that way a very considerable amount of brain-tissue was washed away. The youth recovered completely. Another case, still under treatment, was that of a man who sustained a severe scalp wound and depressed fracture of the occipital bone from a plank falling on the back of his head. Trephining was practised, and a large piece of bone removed, when an extensive rent was found in the dura mater, through which the finger could be passed for the depth of nearly two inches. Mr. Callender washed out the brain very freely with carbolic solution, and inserted a drainage-tube. The patient passed through a period of over-action after this, marked by restlessness and by convulsions. Then he lost the power of co-ordinating his muscular movements, but eventually he got quite well. In fine, Mr. Callender was coming to the opinion that large amounts of cerebral surface-structure may be got rid of without fear, provided the injuries were treated on the same principles as open wounds of other parts.—Mr. NORTON had lately seen a farm labourer, twenty-four years of age, who was delivered at his birth by means of craniotomy. The operation could not have been very successful, for the child, put aside for dead, began to show evidence of vitality, and had now grown to manhood, with a misshapen skull, but having "as much intelligence as most farm labourers possess."—Mr. LUCAS, in reply, said that the paralysis on the side opposite to the meningitis was not complete, and in this case there was also paralysis of the opposite arm. He thought injuries to the anterior lobes of the brain were more readily recovered from than those of other parts, but that the tendency to recovery was in great measure proportionate to the small amount of education.—Mr. CALLENDER promised to bring his second patient before the next meeting of the Society.

The Society then adjourned.

OBSTETRICAL SOCIETY OF LONDON.

AT the meeting of this Society held on the 2nd inst. (Charles West, M.D., President, in the chair), William Burton, L.R.C.P. Edin., and H. Macnaughton Jones, M.D., were elected Fellows.

Dr. HERMAN exhibited a child showing one of the possible results of the use of the Forceps. A little behind the right frontal eminence was what felt like an irregular gap in the bone, about two inches long by about half an inch wide. This was occupied by a pulsating swelling. The superficial veins in the neighbourhood were larger than on the opposite side. Running obliquely across the skin over its lower part was the scar of a laceration, which, according to the medical man in attendance, had been undoubtedly caused by the forceps. The child's mother said that a piece of bone had subsequently come away from the wound. — The President, Dr. Edis, Dr. Playfair, Dr. Hayes, and Dr. John Williams offered some remarks.

A paper by Dr. HERMAN was read, on the Treatment of Pregnancy complicated with Cancerous Disease of the Genital Canal. The author first narrated two cases which had come under his own care. In one, labour was obstructed by a cancerous tumour of the rectum. The patient was delivered by cephalotripsy, and died from peritonitis. In the other, the cervix uteri was fixed by cancerous disease; abortion was induced at the end of the fifth month. The patient lived seven months afterwards, marked relief to the symptoms having followed the abortion. An analysis of 180 recorded cases, collected from different sources, and classified, was then given. From them he drew the following conclusions:—1. That whatever influence cancer of the uterus may have upon conception is adverse to its occurrence. This was inferred from the small number of cases in which the patient was suffering from cancer at the time conception took place, as compared with the frequency of the disease. 2. That cancer of the uterus tends to produce the intra-uterine death and premature expulsion of the fœtus. This conclusion followed from the large proportion of premature births, and of not only still-born, but decomposing children. 3. That the growth of cancer of the uterus is, as a rule, accelerated during pregnancy. This was supported by *à priori* arguments from general pathology, by the analogy of the breast, and by the improvement which often followed the termination of the pregnancy. 4. That with cancerous

disease affecting the whole circumference of the os uteri labour may be quick and easy, and the patient may recover well, and live for months afterwards. 5. That when delivery under such conditions is accomplished by natural efforts, expansion of the cervix usually takes place by fissuring. 6. That this fissuring does not usually augment the risk to the mother. 7. That imitation of this natural process, by making incisions, neither increases the danger at the time nor accelerates the progress of the disease subsequently, and that it often greatly facilitates delivery. 8. That the cases in which the cancer forms a tumour of great size or hardness are the ones in which delivery by natural efforts will not take place. 9. That where the above characters are absent no definite criteria can be drawn from the local conditions by which to foretell the behaviour of the os uteri during labour. 10. That where delivery of a living child *per vias naturales* is impossible, such limited experience as we have shows that there is but little difference, as to risk to the mother, between craniotomy and Cæsarean section. 11. That a part of the cervix uteri may with safety be removed either during pregnancy or during labour. These last eight conclusions were supported by the evidence of recorded cases. The author then considered from these data the practice to be followed. He assumed that the life of the mother was the first consideration, and that the production of abortion was justified if maternal life could be saved or prolonged thereby. The following were the rules of practice which he thought indicated:—1. That where it is possible to remove the disease, either during pregnancy or at the time of labour, it ought to be done. 2. That where this cannot be done, the safety of the mother is best consulted by bringing the pregnancy to an end as soon as possible. 3. That when labour has actually come on, expansion of the os uteri should be aided by making numerous small incisions in its circumference. 4. That dilatation of the cervix uteri being in progress, if uterine action should be deficient and it should become necessary to accelerate labour, the use of the forceps is, as a rule, better than turning. 5. That when dilatation of the cervix cannot take place, even after incisions have been made, either from rigidity or magnitude of the tumour, Cæsarean section should be performed.—The PRESIDENT considered that the conclusions which Dr. Herman had arrived at were sound and practical. As evidence of the rapidity of the growth of the disease during pregnancy, he remembered a case under his care, many years ago, at St. Bartholomew's Hospital, of a woman suffering from incipient soft cancer of the uterus. After the husband's return, following a long absence, pregnancy occurred, and rapid increase of the growth ensued, which resulted in abortion between the fifth and sixth months.—Dr. MATTHEWS DUNCAN complimented the author upon his paper, which he considered of extreme value, as comprising a larger collection of cases for founding direct conclusions upon than had hitherto been used. He would call attention to the well-known frequency of miscarriages in cases of pregnancy complicated with cancer, because this paper afforded valuable evidence that these miscarriages were, in a large proportion, owing to the death of the fœtus. This was particularly interesting at present as illustrating a matter that was attracting great attention, the influence of anæmia and other cachexies in causing intra-uterine death.—Dr. GERVIS referred to the value of the local application of perchloride of iron solution to the incisions Dr. Herman had advised, both to check the immediate hæmorrhage and to lessen the chance of subsequent septic infection. He also thought that Dr. Herman had somewhat undervalued the efficacy of the hydrostatic dilators in assisting delivery in cases of rigidity of the cervix from carcinomatous infiltration.—Dr. HEYWOOD SMITH mentioned a case where an indurated malignant cervix had come away during labour as a ring around the child's neck, the mother making a good recovery.—Dr. BRAXTON HICKS had never used incisions, but had found the administration of chloroform and the dilating bags together of great value in overcoming the rigidity; he considered the bags preferable to either forceps or turning.—Dr. GODSON called attention to the rapidity with which cancer spreads during the period of involution. He had seen many advanced cases shortly after delivery, in which no symptom of the disease existed previous to the parturition. His experience was in support of Cæsarean section in preference to craniotomy. In the two cases in which he had performed the latter operation in consequence of cancer, the patients had died within a few days of their delivery; both children appeared healthy, and would probably, under other circumstances, have been born alive.—Dr. EDIS remarked that as to the cancerous cachexia proving detrimental to the life of the child, he had recorded one case before the Society where labour came on spontaneously at full term in a patient with extensive malignant disease of the cervix uteri, and where delivery of a healthy living child was effected by the aid of the forceps. The mother succumbed with pyæmic symptoms, but the child is still living.—Dr. GALABIN related the history of a very extreme case, as an addition to the evidence which had been brought forward, to show that hydrostatic dilators might, in some instances, afford valuable service.—Dr. HERMAN replied.

A case of absence of the uterus in a young married woman was communicated by Mr. GEORGE MOWAT, of Swansea.

The meeting then adjourned.

Reviews and Notices of Books.

Recherches Anatomiques et Cliniques sur les Gaines Synoviales de la Face Palmaire de la Main. Par CH. ED. SCHWARTZ. Paris: Baillière et Fils.—In the first part of this *brochure* the normal and abnormal arrangements of the synovial membranes of the palm of the hand are very carefully described, especial reference being made to the communication of the internal and external palmar membranes with the sheaths of the little finger and thumb respectively. The opening between the inner palmar and digital sheaths is said to be very small, situated between the two flexor tendons of the finger, and, in part, obstructed by a semilunar fold of synovial membrane; while that between the outer palmar and digital sheaths is described as freer and more direct, except in some few cases. In 5 per cent. of cases there is no communication between the palmar and digital sheaths, this arrangement being symmetrical and congenital. In 12 per cent. there is a communication between the two palmar sheaths, more often on the right than left side, not seen in children, but acquired as the result of manual labour; in such cases, also, accessory bursæ are sometimes met with in the right hand. Passing on to inflammation of the hand, the author insists on the great importance of these anatomical facts, and is at great pains to show that adhesive inflammation frequently limits diseased action. This most readily occurs in the digital sheaths, and especially at the narrow opening between the inner palmar and digital sheaths. He cites cases to show how this will limit suppuration to the finger, or, in other circumstances, to the palm, and relates one case where a sarcoma, growing in the inner palmar sheath, was by this means shut off from the little finger. On the other hand, inflammation of the outer sheath generally involves the whole synovial membrane, both palmar and digital. When either palmar sheath is affected the inflammation invariably spreads to the other; this, as his anatomical observations show, is not by continuity, but by contiguity of tissue. He next deals with the disease of the bones and joints of the hand consecutive to suppuration in the palmar sheaths, and shows that it begins and is most intense in the unciform, os magnum, and trapezium, which is explained by the very intimate union of the synovial membrane with the periosteum over these bones; while elsewhere it is surrounded by a soft bed of cellular tissue. Similarly in the fingers, the sheaths are firmly adherent to the bones, loosely attached to the capsule of the joints, and inflammation is readily propagated from them to the former, but not to the latter. There are other points of practical interest brought out by the author, which we have not space to refer to. The above suffices to show that the work illustrates the great light often thrown upon the processes of disease by exact anatomical knowledge.

An Introduction to Pathology and Morbid Anatomy. By T. HENRY GREEN, M.D., &c. Fourth Edition, with 132 Wood Engravings, pp. 440. London: H. Renshaw.—This excellent work has reached its fourth edition, and we are not surprised at it. The author has still further improved it in many ways. The total amount of additional matter is considerable, and good in quality, especially that which relates to pulmonary diseases. The revised chapter on Phthisis deserves special commendation. The improvements are not confined to the letter-press, but embrace additional illustrations, drawn by Mr. Collings, from the author's own preparations. The work, in its scope and detail, we need not add, now meets the requirements of the advanced medical student, and does the author great credit.

Cholecystotomy, for the Removal of Gall-stones in Dropsy of the Gall-bladder. By J. MARION SIMS, M.D. London: T. Richards.—This paper is a reprint from the columns of a contemporary. In contains the history of a case of dropsy of the gall-bladder from impacted gall-stones, which was first treated by aspiration, and then by the formation of a biliary fistula. The patient experienced relief, but died exhausted by passive hæmorrhage eight days after the operation. The wound was found to be healed, and there was no trace of peritonitis. Dr. Sims advocates the operation in all stubborn cases of impacted gall-stones, and urges that it should be performed before the blood is thoroughly poisoned by bile. He also recommends the employment of exploratory incisions in cases of abscess or hydatid disease of the liver, as he holds that such a step has been robbed of its perils by Listerism. The pamphlet is well worthy of perusal.

The Birmingham Medical Review. Oct., 1878. Birmingham: White and Pike.—This number concludes the first volume of the new series of this provincial quarterly. It contains several careful reviews of recent works, and the first of the course of Ingleby lectures delivered at Queen's College, Birmingham, by Dr. John Clay. The subject chosen by the lecturer was that of Maternal Mortality arising from parturition, and, dealing with the causes of such mortality, he shows how the "phenomena of labour occurring in civilised society are not in accordance with the laws of nature, and that consequently certain conditions of life imposed by an artificial civilisation bear a direct relation to maternal mortality." A clinical lecture by Mr. James West on Intestinal Obstruction, containing an account of a case of colotomy in the right loin with successful result; a paper on the Chemistry and Physiology of Aquaria by Dr. Hinds; and the continuation of an article on Restraint in the Treatment of Insanity by Dr. Bodington, form the list of original communications. Dr. Bodington advocates the "judicious" and "rational" use of mechanical restraint, both as a protection and a remedial measure, and he concludes his paper with the entreaty "that this matter of mechanical restraint may be looked into and examined without prejudice or foregone conclusions; that it may, where tried, be put in practice fairly and fully, not carelessly nor in a perfunctory manner, and not tossed on one side without giving it a complete test." Reports of cases by Drs. Saundby and Carter and some paragraphs of medical news complete the number. The journal is edited by Dr. Robert Saundby.

The Identification of the Human Skeleton. A Medico-Legal Study. By THOMAS DWIGHT, M.D., late Professor of Anatomy at the Medical School of Maine. Boston: David Clapp and Son.—To this essay was awarded the prize of the Massachusetts Medical Society for 1878. The identification of bones is frequently a matter of the greatest interest and importance, and it is here shown that it is attended with great difficulties, and that oftentimes it may be impossible to assert dogmatically that a certain skeleton is or is not that of a certain individual. Indeed, in such cases greater reliance has to be placed upon known peculiarities, as lost teeth or fractures, than upon the general conformation of the skeleton. The essay has been written with care, and contains a very useful summary of the data upon which opinions should be based.

Reflex Symptoms in Hip Disease. By EDWARD H. BRADFORD, M.D. Boston. Read at the Annual Meeting of the Massachusetts Medical Society, June 11th, 1878.—The author has examined fifty cases of morbus coxæ, and fifty patients who were either healthy or had some disease liable to be confounded with hip-joint disease. With one exception, he found limitation of movements in all the former fifty, usually in all directions, but most easily observed in extension. In health, when a patient lies on his back, the popliteal space can be pressed flat on the bed without arching of the back or tilting of the pelvis. Dr. Bradford found stiffness of the joint in other diseases, such as sprain of the joint, caries of the spine, abdominal abscess, caries of the great trochanter; but the limitation of motion to an equal degree in all directions is highly characteristic of a joint affection. He has noted also a peculiar wavy contraction of the muscles of the thigh on moving the limbs. He is able to confirm Lefort's statement that the muscular irritability to the faradaic current is diminished early in hip disease, but whether this is met with before atrophy he cannot say. The tone of the muscles being a reflex phenomenon, these variations in it from the irritation of joint disease are easily explained.

On some Forms of Extemporaneous Conveyances for Sick and Wounded in Peace and War. By Surgeon-Major J. H. PORTER. London: Harrison and Sons.—We are glad to see that this paper, which was read before the General Assembly of Members of the Order of St. John of Jerusalem, England, has been published. The subject is dealt with in a thoroughly practical way, and it would be well for colliery and factory managers, railway stationmasters, and others liable to have to arrange for the conveyance of sick and wounded, to study it and prepare themselves for emergencies.

THE COUNCIL OF THE COLLEGE OF SURGEONS.

AT a quarterly meeting of the College of Surgeons held on Thursday, the 17th instant, the following business was transacted:—

The minutes of the last meeting having been confirmed, a vacancy in the Council, caused by the death of Mr. John Hilton, was reported. The President accompanied the formal intimation with an expression of the deep regret which was felt by the members of the Council for the loss of their esteemed colleague, and a vote of condolence with his family was passed.

The reports of the several annual committees were then received.

A requisition, signed by thirty members of the College for a meeting to consider certain suggestions contained in a circular recently addressed to the Fellows by Mr. Quain, was referred to the President and Vice-Presidents to be reported on to the Council.

Mr. HOLMES then rose to call the attention of the Council to the desirability of discontinuing the Preliminary Examination for the Fellowship in the form in which it is now conducted, and to move a resolution thereon. The proposal was carried, and a committee appointed to consider the general subject of preliminary examination.

Mr. GAY next moved, "That a course of lectures on Nematoid Parasites in relation to Endemic and Epizootic Disease be given in the theatre of the Royal College of Surgeons, and that Dr. Spencer Cobbold be invited to deliver such lectures." This motion, after some discussion, was withdrawn.

Mr. BUSK's motion on expenditure was carried.

THE LANCET.

LONDON: SATURDAY, OCTOBER 19, 1878.

WE do not pretend to know what are the feelings with which the members of the General Medical Council come to their new duties, but we think they must be conscious of some misgivings. They are committed, indeed, by the terms of a resolution passed in July without a dissentient, to take into consideration the constitution of the General Medical Council, which, they say, needs revision. Such an occupation would be altogether creditable to the Council, and it is likely to be invited to engage in it in its present session. Sir DOMINIC CORRIGAN has given notice of an intention to remind the Council of its resolution of the 3rd of July, to which we referred last week. On the 4th of July the Council remitted to the Executive Committee the work of preparing a report on the present constitution and working of the Council, and on the changes (if any) by which it might be rendered more efficient for the discharge of the duties it has to perform, and requested the Executive Committee to let its report be circulated a month before the meeting at which it had to be discussed. Since July the members of the Executive Committee have probably done little towards preparing a report on such a serious and complicated a subject as this; but Sir DOMINIC only finds in this fact a reason for proposing that the Council itself should proceed to do that which the Executive Committee has failed to do. While agreeing with Sir DOMINIC that the duty before the Council to report on its constitution and working is most urgent, and worthy of the serious attention of all the members, we see little chance of the Council having any time for doing so during its present sitting. It has a new Act of Parliament to administer, which may well take all its time and tax all its patience. The fact is that the members of the Executive Committee must either fail to do all the work that is put on their much-enduring shoulders, or the work must be badly done. The Council, apart from the Dentists Act, which adds so seriously to the amount of its labours, and to the labours of all its officials, has far more work than it can well perform. The consequence is a constant tendency to leave important matters to the Executive Committee, or to the President, or to the Registrar. Every session it may be observed that a deal of time is wasted on comparatively unimportant questions, and that a number of the most vital subjects are disposed of at the last moment in the most cursory manner. It was so at the last meeting. The subject of the Dentists Bill was most inadequately discussed, and on the strength of this inadequate discussion, the sanction of the Council was given to a measure which gives legal recognition to specialism, and opens a sort of back-door to the profession, just when we were all hoping for a single portal through which no one should pass who did not reach to a certain standard of medical and surgical attainment. Whatever the faults of specialism hitherto, its most distinguished representatives have been men of high general medical education, who began in some way of general practice, and came gradually to specialise their work. It is easy to see the difference between specialism with such a basis, and specialism with the basis of a restricted medical education to which the Legislature has just given an extended recognition, and which the Medical Council is henceforth required to recognise. What should we think of ophthalmic surgeons being registered and recognised by the General Medical Council on the strength of something below the minimum examination of the College of Surgeons or of the College of Physicians? What should we think of a class of aurists distinct from the members of the profession? Yet this is the kind of pass to which we are coming or have come. But it may be asked, what is the use of complaining now—now that the Dentists Act is an accomplished fact, and that the Medical Council has undertaken to administer it? Our answer is—we desire to have no more such accomplished facts, and we further hope that the Council will do nothing to identify the Medical Register and the Dentists' Register. There is, we believe, some intention to incorporate the two Registers in one volume. We trust that no such proposal will be accepted by the Medical Council. The Act contemplates the separateness of the Medical Register and the Dentists' Register, and it is certainly not for the Medical Council to do anything to make the distinction less apparent than the Act itself requires. More than this, we may surely hope that the Medical Council will attach some severity to the expression "engaged in the practice of dentistry or dental surgery," used in the Act as constituting a title to registration. It will be simply lamentable if the Medical Council accept the mere fact of having extracted teeth as synonymous with practising dentistry.

We cannot doubt that the Medical Council must set about its new duties with some misgivings. If it really finds that the work which, in a moment of rashness, it accepted is greater and more exacting than it anticipated, and such as seriously to interfere with its own proper function of superintending medical education, it will become the duty of the Council to lose no time in saying so. Such a representation, if it has to be made, would form a very proper part of the promised report of the Council to the Government. It is perhaps a fortunate thing that the Dentists Act has to be administered before the Council has to report on its own constitution and functions. This experience will, let us hope, make the Council a little more chary of undertaking fresh duties, and more contented with those which it was called to perform in 1858, but which it has up to this time very imperfectly discharged.

IN a paper recently contributed to the *Revue Mensuelle* MM. BALZER and TALAMON describe certain inflammatory changes in the parotid and submaxillary glands as almost constant concomitants of pharyngeal diphtheria. They remark that these changes have been strangely overlooked; for, although indicated by Dr. SAMUEL BARD, of New York, so long ago as 1771, in his work "On the Nature, Cause, and Treatment of Suffocative Angina," as occurring in some cases, yet BRETONNEAU and all succeeding authorities have considered that when BARD spoke of swelling of the "parotid and sublingual glands," he was confounding them

with the lymphatic enlargements which are a constant feature of the disease. Seeing how frequently the salivary glands, especially the parotid, became affected in infectious diseases, and noticing also that the peculiar aspect of the tumefaction beneath and behind the jaws in diphtheria was not explained on the ground of lymphatic inflammation alone, MM. BALZER and TALAMON determined to investigate the condition of the salivary glands in this disease, and with the result of showing that BARD was right. Thus, after the lapse of more than a century, has a clinical observation been confirmed by pathological research.

The morbid changes noted by BALZER and TALAMON concern both the cells of the glandular epithelium and the interacinous connective tissue. The former, in the slighter cases, are swollen and filled with homogeneous translucent mucoid material, and the cells of GIANUZZI are more numerous than normal. More often the acini are diminished in size, their cells small and granular, presenting the appearances shown by RANVIER to exist after prolonged excitation of the nerves going to the gland. In other parts the acini are filled with small round cells, the glandular structure almost disappearing, and when this alteration is most extreme the accumulation of leucocytes is sufficient to form small abscesses. There is similar infiltration of the connective tissue within the lobules and acini, but less change in the perilobular and periglandular tissue. The lymphatics within the gland are stuffed with round cells, and often form small abscesses around the lobular ducts. The larger ducts show but little change, but this does not negative the idea that the inflammatory lesions commenced in them, or rather travelled down them to the glandular substance. These changes were found in all the cases of diphtheria examined, without regard to the mode in which death had occurred. Applying these facts to those observed at the bedside, they point out that quite early in the disease there is swelling of the neck beneath the jaw as well as behind its angle. The swelling in the latter situation, and extending along the border of the sterno-mastoid, is due largely to enlargement of the chain of lymphatic glands, which receive their lymphatics from the palate, uvula, and tonsils. Part of the swelling may, however, be due to parotitis, and often there is, in addition, some œdema of the surrounding connective tissue. The submental enlargement is solely due to the inflamed submaxillary gland. It is not dependent on enlargement of the lymphatic glands lying here, for not only do they not receive lymphatics from the parts affected by the diphtheritic inflammation, but after death these lymphatic glands are barely if at all enlarged. The same argument applies to the view that the swelling in the parotid region is due to lymphatic and not salivary gland inflammation, for here also no lymphatic vessels pass from the pharyngeal region. They hold, then, that there are three factors in the production of the swelling of the neck in diphtheria: firstly, lymphadenitis, leading to the painful, small, hard tumours behind the angle of the jaw and along the sterno-mastoid; secondly, inflammation of the salivary glands, producing the uniform, smooth, elongated swelling beneath the lower border of the jaw, and that which fills up the hollow immediately behind the ramus; and, lastly, the general swelling of the hyoidean region, due to inflammatory œdema of the cellular tissue. Whether the inflammation of the salivary glands is primary or secondary to lymphatic inflammation they give no definite opinion; but owing to the very early appearance of the swollen submaxillary glands, they do not think it due to the general blood-condition, as in the parotitis of specific fevers.

A SENSATIONAL story of murder and attempted body-selling for medical purposes, in America, is recited with much unction by the *Daily Telegraph*. Our contemporary recalls the horrors of the BURKE and HARE outrages, and, as a moral to the tale, justly contends that the Legislature of the United States should "follow the course taken by the British Parliament after the Edinburgh tragedy came to light, and adopt such measures as will prevent the demands of the dissecting-room from resulting in body-snatching and murder." This is certainly the prudent policy for every civilised State to pursue, and it is strange to find that it is anywhere neglected. Meanwhile, such recognition of science as this provision may be held to imply is by no means an advanced stage of development. Tolerance is a great point gained when an art has been previously regarded with suspicion, and possibly the stride from aversion to tolerance, when the enterprise recognised is so important to the public prosperity as medicine, may be longer than the next step in advance—namely, such recognition as consists in the State use and acknowledgment of the services the science is able to render. We have passed both these stages in England, and are beginning to hope that a third and more progressive movement may be shortly accomplished—that is to say, a formal recognition of the profession of Medicine as a public body to which none can be admitted except by a single portal, in some sense kept by the State.

Medicine has now clearly reached a stage of development in which it can no longer be regarded as a simple adjunct to the health and happiness of the people. Health is an integral part of prosperity, and must be sought with it. The Government that omits this factor in the calculation of results, or fails to give it full value, will reap disappointment. Whether in questions of domestic administration or foreign policy, military or commercial, health must play the prominent part of a conditional element to be carefully considered. And it will not suffice to treat this matter as a contingency; the neglect to give it a foremost place in deliberation will entail discomfiture or depreciate the value of success. The country has had many untoward experiences of this fact, and is at the present moment passing through such an experience in connexion with our most recent acquisition—the island of Cyprus—which will, or will not, recompense the trouble and cost of our guardianship, together with the lives needlessly sacrificed by want of obvious precautions in taking possession, as it may prove practicable to eradicate the diseases now prevalent. In a word, Medicine is not any longer to be regarded either as a mysterious craft, to be tolerated by the State, or as a somewhat useful accessory to be employed—like the lime-juice on an Arctic Expedition—at the caprice or even the discretion of the Government. It is itself a part of government, and must be recognised as a branch of political economy, not less important or practical than the adjustment of a paper currency or the management of the national debt. The great

outstanding "debt to nature" for which every member of the population is individually liable, and on which the nation as a whole pays so large an amount of interest in the shape of disease, is too vast a factor in the sum of prosperity to be ignored by any real *statesman*, let his views of party policy be what they may.

It is because we feel strongly that the time has arrived when this broad and practical view of Medicine in its relations with the State needs to be developed, that we urge the appointment of a Minister of Health, who shall himself be a political power in the Cabinet, so that the interests of public health may be treated as an integral part of policy, and receive a full share of the prestige or discredit by which the Government stands or falls. One of the earliest effects of such an appointment would be to give a new status to medical officers of all classes throughout the country. It would enlarge their responsibility and increase their authority. They would be less purely consultants, and more directly administrative. At present it is difficult, if not impossible, to determine where the blame for any neglect of public duty in matters medical and sanitary justly lies. The uncertainty exists in connexion with all the services, and for the simple reason that, in spite of high-sounding titles and official position, the men with whom it must always rest to provide for the health of our forces by sea and land, or to secure the maximum of health—and therefore fitness for labour—among the bread-winning classes, are not empowered to interpose unless they are *consulted*, and then only to counsel when they ought to be able to act! In prophylaxis, as in the therapy of disease, the medical authority must be allowed to choose its own time for interference. There is something grotesquely absurd in the notice of lay officials, with no knowledge of the laws of health, or the habits of disease, having the disposal of medical advice at will, and thereby practically limiting the progress of sanitation. If Medicine obtains the recognition implied by the institution of a political department of Health, there must be such a reorganisation of the machinery of health throughout the country as will raise sanitation to the level of a coherent policy. It will be a happy circumstance if the changes now in progress in the Services are carried out with some regard to this issue, which, we venture to hope, may be deemed a feature of domestic reform waiting only the leisure of the Legislature for its fulfilment.

Another early consequence of the measure we advocate would be the general adoption of the principle of registering disease. We have a system of registration for the assigned causes of death; it would be only an obvious step forward to register disease. Death is the penalty of life, but it is also the accident of disease; and just as the number of deaths per head of the population throws light on the history of vitality, with many pregnant hints for its preservation, so the number of deaths by any malady, calculated upon the total of cases of that disease, would supply suggestions that could scarcely fail to be useful in treatment. As it is, we know how many of the population die, and, subject to certain considerable sources of error, what diseases cause their death; but we have no broad means of determining the mortality of diseases, because there is no registration of cases which do not terminate fatally. One of the first steps a Minister of Health would feel it his duty to take is the establishment of a complete system of registration, enforcing accuracy in returns of the causes of death, and recording all cases of occurring disease. There are many pressing reforms which may be expected to ensue when Medicine is recognised as a part of State policy, but these are especially important, and we mention them because they are just now presented to the public mind with great clearness; and events seem to be tending towards a crisis in our national history at which they are likely to acquire an importance it would be difficult to over-estimate. We see the remedy for many calamitous grievances of a sanitary and medical character in the reform urged, and it is with the desire that the weight of these difficulties and misfortunes may be thrown into the scale of argument we again call attention to a subject of which the profession should never weary until its demands are satisfied, and Medicine is not only tolerated or used, but *established* in our midst.

Annotations.

"Ne quid nimis."

THE "SANITARY SITUATION" AT CYPRUS.

As letters from the island, written by military medical and amateur observers, increase and multiply, we are enabled to string a few sufficiently obvious facts together, and to draw therefrom some sort of conclusions, though these may not be at present of a specially definite character. It appears to be tolerably clear—(1) that green food is not abundant in the island, (2) that change of locale produces little or no effect on the general condition of the patient, (3) that undoubted symptoms of remittent fever are specially prominent, (4) that most of the patients exhibit scorbutic symptoms, (5) that the cases of dysentery occasionally met with are not acute or indigenous, but are most likely imported from India or China, the patients having had original attacks in one of those countries some years previously, and (6) that the natives do not enjoy any immunity from the disease, whatever it may be. This last fact is very important, but surely is no proof (as most of the amateur writers appear to think) that the malady is not curable or preventable. Judicious treatment has driven out many diseases from as many districts, never to return as long as the prophylactic regimen is persevered in—a very familiar example being ague and its concomitants from the eastern counties of England. But, as is particularly remarked in a letter from Mr. Hamilton Lang, that appeared in one of the daily journals on Tuesday last, "it is now time that amateur blundering should give place to the calm, steady, matured dictates of experience." He goes on, in effect, to counsel the erection of good permanent barracks, "keep military men for military employments, find experienced civilians for civil duties"; and so on. It is satisfactory to find that THE LANCET is, so to speak, consistently supported in its practical views by one who, as our Consul on the island for many years, is probably better qualified than any other man to discuss and give advice on this important subject. We have always maintained that the War Office staff ought to be supplemented by several civilians who have made hygiene, climate, and preventive medicine, their study. For, in spite of the school at Netley, and its admirable staff of teachers, the public medical services are just now so unpopular that, in point of fact, neither the Army nor the Navy staff includes as yet a sufficient number of competent men who, well drilled by De Chaumont and Denis Macdonald, can be detailed for this sort of work on any emergency. Such men,

doubtless, should exist, but they do not, and hence we have always counselled the Government to secure the services of two or three men of the Simon type, who, if sent over to the island for a stay of some few months, would, in conjunction with the engineering, medical, and commissariat contingents, organise and set in motion a system based upon sound and successful prophylactic principles. As Mr. Lang remarks, we have had enough blundering. For blundering there has undoubtedly been, although whether it be but a *repliqué* of the circumstances that resulted in the failure of the Arctic Expedition, it is not for us to say, or perhaps to suggest. Meanwhile, with two prominent hygienic failures staring us in the face (the one perpetrated in a frigid, and the other in a semi-tropical zone), it is well that our eminent, though somewhat ancient, sanitarians should cease to stump and declaim about the country, until we can show to our continental neighbours some really practical results of all the sanitary preaching with which the expiring autumn has been beguiled.

FEMALE DOCTORS.

THE woman question is perennial, and though women are now admitted to degrees and diplomas in medicine, they and their supporters rave more vigorously than heretofore. This week the *Standard*, which as a rule has written guardedly and temperately on the subject, has broken out into a violent attack against "the majority" of the medical profession. It charges the profession generally, and insinuates (to use a mild term) that they now denounce medical women with "a violence both unjust and ungenerous," and that they are influenced by that "narrow spirit of jealousy" which is met with amongst trades-unionists. Hard words, for which no justification is given, are flung at the whole profession, and we regret that an influential paper could not find in the motives of those who declared the admission of women to the medical profession to be mischievous, something to keep it within the bounds of moderation. The writer in the *Standard* asserts that the opposition to women doctors comes from those "not of the widest culture, or most thorough knowledge of medical matters," and in this category includes the great majority of the profession. We presume that he deems himself highly cultured and also well instructed in medical matters, and wonder in what world he has of late been living. He declares that the opposition to lady-doctors is now more "pertinacious and bitter," and fears that a repetition of the "too familiar attacks" may not only injure lady-doctors, but the whole female sex—nay, the whole of society! Our profession is charged with refusing to women a "social tolerance, and thereby with undermining society generally"; but the height of absurdity is not reached until we are gravely informed that ladies who object to doctors of their own sex must be suspected merely to echo the "ungenerous protests of their medical guides." All this is very amusing, but could anything be more unjust than the insinuation conveyed? For the insinuation means, if it means anything, that the majority of the profession has forgotten its most sacred observances in order to gratify the "personal jealousy" of a "few feeble female competitors." Surely a leader-writer in the *Standard* must know that the medical press has of late been silent on the whole question, and that even when the excitement raised by the supporters of female doctors was at its highest there was no instance where vituperation was made to take the part of argument after the deplorable fashion adopted by one who can find no better mode of describing the motives and conduct of the "majority" of the profession than by the use of terms such as a "monstrous system of attack," "a spirit of narrow jealousy," "a spiteful jealousy," and "trades unionism." It is a pity that such things should be, for in any strife they cannot calm down "bitter feeling" either of man or woman. The *Standard* is wroth because some men disagree with it as to what is "unwomanly," and refuse to accept its definition of "indecency." Possibly it is influenced by the best motives, but, having constituted itself a censor of the profession, it might extend from its lofty pedestal a portion of "generosity and justice" to those who presume to differ from its views. In any case, we are certain that the medical profession will not copy its inflammatory style, which proves more than anything else that the assertions and charges it makes are not altogether above suspicion.

THE CLINICAL SOCIETY.

AT its opening meeting on the 11th inst. the Clinical Society was occupied with the reading and discussion of three widely different topics, each of intrinsic interest and value, and one particularly so from the side issues raised in the discussion. There is no need to recapitulate here the chief features of the cases, they are fully reported in their proper place. Mr. Hulke's communication was of practical importance as showing the facility with which collateral circulation is re-established in the arm after severance of the brachial artery, and the slight risk of secondary hæmorrhage ensuing upon complete division of that vessel. It was the consideration of the slight risk in that direction that determined Mr. Hulke not to perform amputation, and the result proved the wisdom of that course. An interesting feature in the case was the occurrence of anæsthesia in the parts supplied by the median and ulnar nerves, with the subsequent slow restoration of complete sensibility. This temporary abeyance of nerve-function was attributed by Mr. Hulke to the nerves in question having been stretched unduly over the broken humerus, and not to their division and subsequent reunion—an explanation which appears quite sufficient to account for the phenomenon. Mr. Hutchinson's case of suprapubic lithotomy—an operation so rarely performed in modern times that he himself had never witnessed it—for the extraction of a calculus of unusual size, led chiefly to a discussion upon the best course to pursue in keeping the bladder empty of urine; this being found to be the chief difficulty in the after-treatment of the case. Most interest, however, centred in the discussion upon Mr. Lucas's case of pistol-shot wound of the skull, and especially in the valuable facts adduced by various speakers, and notably Mr. Callender, upon the amount of injury which the brain may suffer without obvious ill effects. Mr. Callender's two cases of bold treatment of wounds of the brain may lead to great results, and, if his practice be followed, may not only widen the field of surgical procedure, but may perchance throw light upon some points of cerebral physiology. It may be remarked that in Mr. Lucas's case, where an attack of convulsions, followed by hemiplegia of one side and rigidity of the opposite, was associated with meningitis, there was also some laceration of the frontal lobes of the brain; and it was especially interesting to note that in one of Mr. Callender's cases, in which he had washed out a considerable portion of the cortical matter of the occipital lobes symptoms of muscular inco-ordination ensued, but subsided after a short time. No doubt more details of this case will be forthcoming, and if so perhaps some light may be gained upon the function of a region of the brain which has not as yet yielded any results to the experimental physiologist. At the same time it must be confessed that it will be difficult to locate with much precision the seat or extent of lesion done to any part of the brain subjected to this treatment. The subsequent history of patients so treated will be interesting, but from what fell from other speakers—e. g., Mr. Norton—it would seem that much brain-substance may be lost without appreciable impair-

ment of cerebral function; and the readiness with which one part of the brain will take on the function of another part irretrievably damaged is a well-established fact. No organ illustrates better the law of compensatory action.

THE SICK AND WOUNDED OF THE RUSSIAN ARMY.

RECENT news from the East gives the following returns of the numbers of the sick and wounded of the Russian army in European Turkey who have been sent to Russia by sea from the beginning of the transit by this route to the 1st September O.S. (12th September N.S.) It would appear that not less than 54,132 soldiers and 316 officers have thus been despatched to the principal Russian ports on the Black Sea, of whom 24,500 soldiers and 193 officers were sent to Odessa, 17,121 soldiers and 98 officers to Nicolaiev, 10,173 soldiers and 20 officers to Sebastopol, and 3140 soldiers and 5 officers to Theodosia. The total number of deaths which have occurred among this great number of sick and wounded at sea is stated to have been 50 only, a figure which testifies to the excellence of the arrangements which must have been made for the voyage and the care taken in selecting the patients for transport. There still remain from 3000 to 4000 sick and wounded in Roumelia and Bulgaria for removal by the same route.

The independent work of the Russian Red Cross Society south of the Danube has almost come to an end in consequence of the diminution of the number of sick and wounded with the army in the field. The hospitals at Tcherlou, Loulé-Bourgas, two of the San Stefano hospitals, and two of the Adrianople are already closed, and the hospitals existing in territory about to be re-occupied by the Turks are about to be closed. The military administration proposes to establish hospitals for the forces remaining at Sophia, Kazanlik, Philippopolis, Slivin, and Bourgas. The staffs of the Red Cross Society will return to Russia, but the sisters of charity will remain attached to the different military hospitals which it will be found necessary to maintain. The sisterhoods will be distributed as follows:—That of St. George in the hospitals at San Stefano; that of the Blessed Virgin of Succour ("Protection de Saint Vierge") in the hospitals at Bourgas and Adrianople; that of the "Alleviation of Pain" ("Appaise mes douleurs") in the hospital at Demotika; and that of the Red Cross in the hospitals at Mustapha-Pacha, Philippopolis, and Sophia.

MR. BRIGHT ON LEGISLATION AGAINST DRINKING.

MR. BRIGHT has been requested by the President of the Workmen's Political League for the Annihilation of the Liquor Traffic, to frame a Bill on the subject. But he declines. The letter in which he does so is characteristic in its sense, in its Saxon, and we fear we must add in its tone of mere expectancy, not to say despondency. "I watch the discussion which is now in progress, and hope it may yield some fruit, some plan of procedure which may prove useful to the cause of temperance. The subject is one of great difficulty; the inveterate custom of our people, their belief that stimulants are wholesome and necessary, their habitual and almost universal self-indulgence in them, are obstacles which seem insurmountable. While these opinions and habits prevail, it is difficult to alter the law; a change of law, though not absolutely useless, will do much less for temperance than many sanguine people expect. I hope, however," &c.

Was there ever so much discouragement of effort put into so few words before? We are only too conscious of their force. As medical men we can testify, for example, to the truth of the opinion that a large number of people found their habits of drinking on false views of the dietetic uses of stimulants. But it is as instructive as it is painful to see this leader of the people—one that had unlimited faith in their political capacity—so doubtful of their capacity for sobriety. Mr. Bright, for whom we have great respect, has perhaps one misgiving with regard to the past use of his influence. He has yielded too much to the temptation of lower politicians to look upon the people as mere factors in the production of political changes, and to forget that they have great physical wants, the supply of which it is a prime business of statesmanship to facilitate, as a means of national happiness and virtue. We do not forget his magnificent labours to cheapen bread. But a man cannot live on bread only; he must have something to drink; and we do not remember a sympathetic word from Mr. Bright for any measure to compel a better water-supply—a prodigious element in any attempt to elevate the people. Is it too late now? The voice that did so much to procure the people bread might be most fitly raised to procure for them water and air, for want of which the people languish, and drink, and die. Thirsty men, and weary women, and sickly children, are living in cramped houses, where water has to be carried from the basement in pints that should be supplied in gallons on every floor. Dirt, disease, and wretchedness thrive under a political suffrage that exceeds even Mr. Bright's demands. There is still much for Mr. Bright to do before he speaks so despairingly of the power of legislation.

THE VENTILATION OF BEDROOMS.

ALTHOUGH the blood circulation is less active during sleep than when awake, it is of considerable importance to health that bedrooms should be well ventilated. The sleeper, like a bed-ridden person, is entirely dependent upon the atmosphere supplied to him for the means of carrying on the chemical purification and nutrition of his body. He must breathe the air that surrounds him, and he does this for a lengthy portion of each period of twenty-four hours, although it is probable that in a large majority of cases the atmosphere has become so deteriorated by the expiration of carbon and the emanations from the body generally, that if the senses were on the alert some change would be sought as a mere matter of preference. When a person places himself in a condition to take in *all* air, without being able to exercise any control over its delivery, he ought to make sure that the supply will be adequate, not merely for the maintenance of life, but for the preservation of health. If a man were to deliberately shut himself for some six or eight hours daily in a stuffy room, with closed doors and windows (the doors not being opened even to change the air during the period of incarceration), and were then to complain of headache and debility, he would be justly told that his own want of intelligent foresight was the cause of his suffering. Nevertheless this is what the great mass of people do every night of their lives with no thought of their imprudence. There are few bedrooms in which it is perfectly safe to pass the night without something more than ordinary precautions to secure an inflow of fresh air. Every sleeping apartment should, of course, have a fireplace with an open chimney, and in cold weather it is well if the grate contains a small fire, at least enough to create an upcast current and carry off the vitiated air of the room. In all such cases, however, when a fire is used it is necessary to see that the air drawn into the room comes from the outside of the house. By a facile mistake it is possible to place the occupant of a bedroom with a fire in a closed house in a direct current of foul air drawn from all parts of the establishment. Summer and winter, with or without the use of fires, it is well to have a free ingress for pure air. This should be the ventilator's first concern. Foul air will find an exit if pure air is admitted in

sufficient quantity, but it is not certain pure air will be drawn in if the impure is drawn away. So far as sleeping-rooms are concerned, it is wise to let in air from without. The aim must be to accomplish the object without causing a great fall of temperature or a draught. The windows may be drawn down an inch or two at the top with advantage, and a fold of muslin will form a "ventilator" to take off the feeling of draught. This, with an open fireplace, will generally suffice, and produce no unpleasant consequences, even when the weather is cold. It is, however, essential the air outside should be pure. Little is likely to be gained by letting in fog or even a town mist.

LOCAL SELF-GOVERNMENT: LEEDS AND ITS TROUGH-CLOSETS.

"A Ratepayer for more than Forty Years" asks us from Leeds, to help him in protesting against certain doings of the Municipal Sanitary Committee of that borough as to the introduction of trough-closets into it. His appeal is made in view of the near-approaching election of municipal councillors, and he encloses, for our information, a printed circular detailing certain "alarming evils" which he professes to believe attach to the use of trough-closets. Quite unwittingly he furnishes a most instructive illustration of the difficulties with which local self-government has too frequently to contend, and which unfortunately have kept the town of Leeds so much in the rear of other great towns in its sanitary administration. Our correspondent must have reached the dignity of a ratepayer at a time when, largely under the instigation of the late Mr. Robert Baker, Leeds began that excellent example of sanitary self-investigation, of which the results are to be found in the Journal of the Statistical Society about that period, and which its subsequent sanitary history has so much belied. This investigation brought to light the incontrovertible fact that of many unwholesome conditions from which Leeds suffered foremost must be placed its barbarous privy system. Although much has been done, at great cost, since that time to amend the sewerage, the water-supply, and general uncleanliness of the borough, successive reports, official and non-official, and latterly the reports of the medical officers of health, have shown that what Mr. Robert Baker and others said of the privy system in Leeds thirty years and more ago is practically true of by far the greater portion of the borough at the present moment. Leeds, in respect to its privy system, is still, as it has always been, a scandal amongst our big towns, and the effect of this system is manifested in the most unmistakable manner in the high death-rate of the borough, particularly from certain classes of diseases.

Latterly it would appear that some serious effort is being made by the Corporation to cope with the evils of the privy system in force in the borough by the introduction of trough-closets in cottage property. Such introduction, if it were to become general, would altogether change the sanitary aspect of the place, and remove from it the opprobrium which attaches to its existing common privy system. Our correspondent has given so little heed to the sanitary history of the borough of which he is a ratepayer that he has set himself to work to checkmate the Sanitary Committee in its beneficial effort in the health-interests of the population, and to make the question of "trough-closet" or "no trough-closet" a test of candidates at the coming municipal election. And this is the sort of argument he would advance for this purpose in this year of grace. The cost of the change to waterclosets is heavy, and must in the long run fall upon the poorer class of tenants: the statement is fallacious, but accepting it as it stands, the question of the cost repaying itself over and over again to the poorer class of tenants in health and life is ignored. The trough-closets entail a great *waste* of the town's water: could a water-supply, paid for out of the rates, be put to a more economical use than that of effecting the most needed sanitary amendment of the borough. Leeds would appear to have sufficient water to *trade* with it, and to reap considerable pecuniary benefit from neighbouring districts. Might it not be said that the poorer classes of the borough are being sacrificed to the greed of the Corporation in this matter? The increase of waterclosets will augment the pollution of the river into which the sewage of the town passes, notwithstanding previous clarification: in other words, the passage of the excremental sewage into a stream at a point outside the town, and which in its course below affects no considerable centre of population, horrifies our correspondent, but he approves of the same excremental stuff being stored for indefinite periods in the immediate vicinity of habited houses! He is overpowered by the (? imaginary) stink of the instruments used by the officials engaged in managing and cleansing trough-closets; but he undergoes no annoyance from a middenstead heaped up with putrefying filth at his threshold, the common condition and position of middensteads in Leeds, and affects to believe that a few ashes or a little quicklime scattered over it will obviate nuisance! We need not follow this mischievous nonsense more. Leeds, no doubt, from its past sanitary history, is too rich in ratepayers who steadily resist sanitary improvements of all sorts; but we are justified in believing that even Leeds is slowly but surely extricating itself from their trammels.

ENTRIES AT THE MEDICAL SCHOOLS.

UP to the time of going to press we have received returns from nine of the London Schools of Medicine and one provincial. The following is an epitome of the statements with which we have been favoured, but pending the completion and correction of the returns it is necessary to postpone analysis:—Guy's has 115 new entries, including 13 for special classes, hospital practice, &c. St. Thomas's has 85 new entries, of which 59 are full and 26 partial. At St. George's there are 36 new entries, and 3 to special courses. The London Hospital returns 100 new entries, 55 full and 45 special or partial. University College has 79 new entries. King's College returns 46 first-year's men, and 147 in all attending. At Middlesex the number of new students returned is 47, 33 described as entering for the full curriculum, 10 for the dental, and 4 for occasional classes. St. Mary's Hospital returns as "students attending up to the present date," 20 first-year, 25 second, 32 third, 26 fourth, and 5 fifth-year. From the Westminster Hospital School the return is 14 complete entries and 8 partial. At Charing-cross the new entries are returned as 33, all for the full period and course of study. Owens College, Manchester, has 70 new students; and the Leeds School of Medicine 26 new entries, with a total attendance of 95.

SUMMER DIARRHŒA IN SCOTCH TOWNS.

THE publication of the September monthly return of the Registrar-General of Scotland enables us to compare the fatality from diarrhœa during the past summer, in eight of the largest Scotch towns, with that which prevailed in the largest English towns. The aggregate population of these eight large Scotch towns is estimated at rather more than a million and a quarter persons, and the 577 deaths referred to diarrhœa during the three months ending September were equal to an annual rate of 1·8 per 1000. We recently noted that in the twenty large English towns dealt with in the Registrar-General's weekly return, the death-rate from diarrhœa averaged 4·2 per 1000; diarrhœa was, therefore, nearly three times as fatal in the English as in the Scotch towns. It is well known that the rate of infant mortality from all causes is considerably higher in England than in

Scotland, and it is not surprising, therefore, to find that the death-rate from such an essentially infantile disease as summer diarrhœa presents a similar contrast. In the Scotch as in the English towns, however, the wide variations in the rate of mortality from diarrhœa, bearing no apparent relation to the fatality from other diseases, suggest no satisfactory clue to the controlling influence in the causation of the disease. The annual death-rate per 1000 from diarrhœa in the eight largest Scotch towns during the three months ending September last was as follows:—Greenock 1·0, Aberdeen 1·1, Edinburgh 1·3, Perth 1·3, Leith 2·0, Glasgow 2·0, Dundee 2·4, and the highest rate 3·6 in Paisley. Thus diarrhœa fatality was more than three and a half times greater in Paisley than in Greenock. In the twenty English towns, as we recently noted, the rates from diarrhœa in the same period ranged from 2·4 in Oldham, to 10·2 in Hull. Dr. Stark, in his valuable contributions on vital statistics to the annual reports of the Registrar-General of Scotland, always attributed the excess of infant mortality in England to artificial feeding, and this assertion may, in the main, be correct; but while this may account for the general excess of diarrhœa fatality in England, it is difficult to believe that it affords the solution to the wide variations in the fatality of the disease either in the English or Scotch towns.

THE ACCIDENT AT LIVERPOOL.

OUR correspondent at Liverpool writes:—"The injuries received in the lamentable panic at the Colosseum Theatre last week are as follows. At the Royal Infirmary forty people in all were received. Of these thirty-three were dead. The cause of death, so far as can be ascertained, was: Suffocation, with only slight injuries, twenty; fractured cervical vertebræ and ribs, one; fractured clavicle and ribs, one; fractured ribs, seven; fractured cervical vertebræ, one; dislocation of right shoulder and fractured ribs, one; dislocation of cervical vertebræ, two. Of the living, two were so slightly injured as to be able to go home; two more, after a couple of days in the wards; three remain in the infirmary—one with general concussion, and two with chest and abdominal injuries. At the Northern Hospital, two were brought in dead, apparently suffocated; two admitted, one extensive contused wounds, the other injury to the arm; six treated as out-patients—broken ribs three, bruises and contusions three."

THE LIVER IN PHOSPHORUS POISONING.

WEYL, in a paper published in the *Archiv der Heilkunde*, has given an account of some experimental researches on the changes in the liver in phosphorus poisoning. He confirms the statements of other observers that, unless the degeneration is very acute, there is also an interstitial proliferation, especially in the portal canals. Its occurrence seems to depend on the chronicity of the process. In two cases in which death occurred respectively twenty-four hours and five days after phosphorus had been given by the mouth, he failed to find this proliferation, but it was present in a case in which the animal lived four weeks. In the two former cases, however, the interstitial tissue was fatty. Further investigations were directed to the origin of the fat which is found so abundantly within the liver cells in acute phosphorus poisoning, whether it arises by fatty infiltration or by fatty metamorphosis. He assumes that the latter must present as its earliest stage granular cloudiness and swelling, and as this was found in no case, but always accumulation of fat in transparent cells with distinct nuclei, he concludes that the process is one of infiltration. He believes that the phosphorus decomposes the circulating albumen in the blood, as well as the formed albumen in the cells; so that we have, on the one hand, large quantities of fat formed partly in the blood and partly in the liver and deposited there, and, on the other, lowly oxidised substances, partly nitrogenised, partly non-nitrogenous, as leucin, tyrosin, lactic acid, and urea. It will be observed, however, that the inference from these observations rests on the assumption that the absence of a stage of cloudy swelling excludes the origin of the fat within the cells, an assumption not quite justifiable.

A NEMESIS OF QUARANTINE.

A VAGUE but diffuse series of reports has during the last week gone the round of the daily journals relative to an outbreak of yellow fever and typhus in Madrid. As to the former, it appears to be tolerably clear that, presuming it really to be genuine yellow fever, the disease was imported from Cuba by some soldiers recently arrived who, almost immediately after disembarkation, took quarters in the same lodging, and in one case used the clothes bought of a time-expired volunteer from Havana. A "Madrid Correspondent writes, with refreshing *naïveté*, "It may be supposed that the disease *will not become* contagious." The italics are our own. But surely in Spain, albeit the most quarantine-bigoted country in the continent of Europe, there need be no difficulty in changing such a supposition into a certainty. It is said that there have been as yet but five cases of yellow fever, three of which, however, proved fatal. But it is curious that the very Government which spends much money and wastes still more in trying to keep out contagious and infectious diseases, should be so deplorably ignorant of hygiene as not to know that the poison of yellow fever is undoubtedly susceptible of conveyance from one place and person to another by means of clothing, bedding, &c. It is well, however, that the Spaniards should learn a lesson in this eminently practical way, and we sincerely trust that this circumstance will arouse the Minister of Health at Madrid (if indeed such an officer exists) to a proper and sensible performance of his duties, one of the practical results of which will be the exercise of a little more common sense in sanitary matters and regulations, and a little less obstruction to the commercial interests of foreign countries. If the epidemic continues, our own Government, either through the Foreign Office or Dr. Seaton's staff at the Local Government Board, should most certainly send over a sanitary officer to glean all particulars as to what may be a very interesting event in the etiology of the disease.

THE BIRMINGHAM MEDICAL INSTITUTE.

THE foundation-stone of the new Birmingham Medical Institute was laid on the 11th inst. by Mrs. Evans, the widow of the late Dr. George Fabian Evans, through whose instrumentality the undertaking had its origin. It will comprise a medical library and lecture-room, 46 ft. 6 in. by 31 ft., together with general reading and committee-rooms, offices, &c. The Institute is situate in one of the leading thoroughfares, close to the new Municipal buildings. Mr. Crompton, the President of the Institute, opened the proceedings with an address, in which, after recalling the many good qualities and the high repute of Dr. Evans, he stated that he crowned his devotion to the service of science by giving the sum of £1000, which had been presented to him as a testimonial on his retirement from the office of physician to the General Hospital, for the foundation of a medical library for the Midland district. A valuable site had been presented by the Rev. George Inge, together with £100, as he said for "bricks and mortar"; £2630 had been raised by the medical profession, and £2730 had been contributed by the public, and an endowment of £5000 had also been received for the formation of the library from the Ingleby fund. By these means the Committee were in a position to commence the building, but further funds would be required,

which he hoped the zeal of the profession would soon provide. Mr. George Evans, on behalf of his mother, thanked the company for the respect and regard they showed to his father's memory, and expressed a wish that the building would, on its completion, realise the most sanguine expectations of its founder, and be of benefit alike to the profession and the public. He concluded by handing a cheque for £50 from Mrs. Evans, which was supplemented by donations of £10 from the Earl of Dartmouth and from Dr. B. W. Richardson.

MEDICAL EDUCATION IN CEYLON.

IT is always eminently satisfactory to note the rise and progress of medicine and surgery in our colonial possessions, and more particularly in India and adjacent countries. The Ceylon School of Medicine was established eight years ago by Sir Hercules Robinson, K.C.M.G., then Governor of the island, and Dr. Loos (now colonial surgeon of the Central and North Central provinces) was its first principal. Since 1870, 131 names have been entered in the Register, the students being divided into two classes, primary and secondary. Of a total of 106 registered students of the primary class, twenty-nine have completed their studies and obtained the licence to practise, and most of them have entered the medical department as sub-assistant colonial surgeons. There are now fifty-five students in the school. Sir James R. Longden, K.C.M.G., the present Governor of Ceylon, distributed the prizes on the 22nd of August last, the chief of which were gained by Mr. F. G. Anthonisz, L.M.S., Mr. C. Heynsberg, and Mr. H. Paulusz. The Governor, in his speech, referred particularly to the natural advantages that the island afforded for the acquisition of a very thorough knowledge of botany, which knowledge might probably lead "the student of the school to add something to the Pharmacopœia that may prove of world-wide use."

OPIUM-SMOKING.

SOME remarks on this subject are recorded by Dr. Ayres, colonial surgeon at Hong Kong, in his last report to the Department. According to the opinion and experience of this officer, it is a misapprehension to attribute to the smoking of opium, as a rule, the fearful and ghastly results with which it is usually credited. When offenders are committed to gaol their allowance of opium is frequently stopped altogether, but no evil results ensue. It would appear that opium-eating has been confused with opium-smoking, and that many who practise the latter are the subjects of scrofulous diseases in their worst forms and most advanced stages.

REGISTRATION OF DENTISTS.

ALREADY about 907 persons have been registered under the Dentists Act. No less than 816 of these had no claim to legal recognition except that of being engaged in the practice of dentistry—553 alone, 263 in connexion with pharmacy. Of those registered, 89 possess the licence in Dental Surgery of the Royal College of Surgeons of England. About £1860 have been paid to the Medical Council as registration fees.

THE *Hampshire Advertiser County Newspaper* gives a long account of an inquest on George Tarrant, a blacksmith, of Freemantle, who died of angina pectoris, after being prescribed for by Mr. Abraham C. Godfrey. Patients will die sometimes, even after the best prescriptions—especially of angina pectoris, with a large, fatty heart, and dilated and atheromatous aorta, which, in this instance, were testified to by Mr. Henry Dayman, surgeon, who made the post-mortem. There would be nothing to remark in this case except the kindness of Mr. Godfrey, who, on seeing the patient at his surgery very ill, offered to send him home in a cab and pay the fare. As the poor fellow got worse, and Mr. Godfrey chanced to be out, Dr. Morris was sent for, and arrived in time to see the patient die with symptoms proper to such lesions as we have described above. Dr. Morris, on hearing that the patient after taking the medicine got worse, had the bottle of medicine sealed and tied up, and said there must be an inquest. He also said that the medicine contained chlorodyne, which Mr. Henry Dayman was able to contradict to the satisfaction of the jury. The widow of the deceased, at the inquest, expressed perfect confidence in Mr. Godfrey and his treatment. Dr. Morris must by this time regret the course which he took. In a case of such fatal and extensive disease, to create suspicion of a trusted medical neighbour was almost as great a mistake as it was possible to make.

IT appears that, contrary to general expectation, no difficulty has hitherto been experienced in carrying out the somewhat stringent provisions of the Contagious Diseases (Animals) Act, as regards the cattle trade between Dublin and Liverpool. Six veterinary surgeons and three assistants are now employed by the Irish Privy Council, and during the first week in which the new regulations were in operation 10,000 head of cattle and a very large number of sheep and pigs were sent across in ten steamers to Glasgow, Holyhead, Liverpool, and Birkenhead, all being branded as healthy.

WE observe that Mr. W. S. Ling has been reappointed medical officer of health for the port of Colchester, at half a guinea *for each case attended*. We are curious to know what sort of cases are "attended" in port sanitary districts, and how many there were in the port of Colchester last year. Also, whether inspection of a vessel, or the condemnation of a foul cargo, is classed as "a case attended," and if not, under what head is such work classed. Perhaps the port medical officer of Colchester can enlighten us.

DR. MILNER FOTHERGILL has been elected an Associate Fellow of the College of Physicians of Philadelphia. The number of Associate Fellows is limited to twenty. The vacancy occurred through the death of the late Fleetwood Churchill. The other British Associate Fellows are Sir R. Christison, Sir J. Paget, Professor Acland, Dr. J. W. Ogle, Dr. Peacock, and Dr. Hughlings Jackson.

WE have much pleasure in stating authoritatively that a mild case of simple continued fever only has occurred in H.M.S. *Britannia*, and that there is no foundation whatever for a report respecting the existence of an epidemic of typhoid on board the ship.

IT may interest many of our readers to be informed that at the meeting of the Royal Medical and Chirurgical Society, on Tuesday next, the "Report of the Scientific Committee on the relations between Membranous Croup and Diphtheria" will be read.

THE first of a new line of so-called "refrigerator" steamships—the *Roll Call*—arrived in the Thames some four or five days ago with 458 carcases of sheep from the Crimea, all of which are reported to be in good condition.

THE *Bookseller* for August gives the names of nine ancient and fifty modern authors who have written about Cyprus. How many of these have been consulted by our authorities before or since our occupation of that island?

THE bust of Mr. John Simon, C.B., recently exhibited at the Royal Academy, has just been presented by the subscribers to the Council of the Royal College of Surgeons.

REPORT
OF
The Lancet Sanitary Commission
ON THE
STATE OF THE RIVER THAMES.

No. II.

WE first visited the scene of the accident to the *Princess Alice* on the 30th of September. The day was cold, and so strong a wind was blowing that the water was much troubled on the surface and thrown into waves.

Samples of water were taken deep down, within three or four feet of the bottom, during the high and strong flood tide which prevailed on that day, at the northern and southern sewage outfalls; at the spot where the *Princess Alice* sank; and, lastly, near to the Beckton gasworks. Samples of mud were likewise obtained from three of the above localities. The flood tide was running strongly the whole of the time during which the samples were being collected, and no sewage was escaping, or had been for some hours previously, from either of the outfalls.

The sample of water from the *Northern Outfall* at one hour's flood was, when collected, thick, of a blackish colour and an unpleasant smell. On being allowed to stand at rest for a time, it deposited a blackish sediment, while the water itself was opalescent and of a yellowish tinge. The analysis of the *water*, free from sediment, furnished the following results:—

	In 100,000 parts.
Free ammonia	0·1117
Albuminoid ammonia	0·0462
Chlorine	306·72, equal to
Chloride of sodium	505·46
Sulphuric acid	37·23
Total solids	648·8

Specific gravity, 1·0045.

The *suspended matter* in the same quantity of water was found to consist of

Organic matter	20·27[1]
Mineral matter	95·23
Total	115·50

[1] Equal to 17·5 per cent.

Examined with the microscope, the suspended or sedimentary matter was ascertained to be composed of much mineral matter intermingled with blackened fragments of decaying vegetable tissues, including occasionally husk or hairs of wheat; a few living infusoria, many diatomaceæ, and filaments of fungi. Beyond the occasional presence of fragments of the husk or hairs of wheat, and one or two particles of altered muscular fibre, no other microscopical evidences were obtained of the presence of suspended sewage matter. The following engraving exhibits the principal constituents of which the sedimentary matter consisted in this case.

The sample of water from the *Southern Outfall* was obtained at two hours' flood. This also, when collected, was thick and of a blackish colour, denoting the presence of sewage, judging by the eye alone. After subsidence, it also was opalescent, and presented a yellowish tinge. The analysis of the water when freed from sedimentary matter yielded the results given below.

	In 100,000 parts.
Free ammonia	0·1391
Albuminoid ammonia	0·0404
Chlorine	511·2, equal to
Chloride of sodium	842·4
Sulphuric acid	61·34
Total solids	1070·4

Specific gravity, 1·0072

The suspended matter in the same was composed of—

Organic matter	13·52[2]
Mineral matter	85·56
Total	99·08

[2] Equal to 13·6 per cent.

Examined with the microscope, it was found to have very much the same composition as that taken from the northern outfall, obtained under nearly the same condition of tide and weather. The only microscopic evidence of the presence of sewage consisted in the detection of a few hairs of wheat, and one or two minute portions of partially digested muscular fibre. Thus, its constituents, if figured, would resemble very closely those pourtrayed in Fig. 1.

FIG. 1.—*a*, Fragment of altered muscular fibre. *b*, Fragment of decaying vegetable tissue. *c*, Threads of cotton. *d*, Infusoria. *e*, Diatomaceæ. *f*, Earthy and sandy matter.

The water taken at one hour's flood from the spot where the *Princess Alice* sank was thick, turbid, contained much sedimentary matter, and emitted a slightly disagreeable odour. It had a yellowish tinge, and after subsidence was found to be opalescent only to a small extent. The clear water on analysis furnished the following results:—

	In 100,000 parts.
Free ammonia	0·0849
Albuminoid ammonia	0·0436
Chlorine	279·03, equal to
Chloride of sodium	459·81
Sulphuric acid	29·74
Total solids	592·8

Specific gravity, 1·0042.

The suspended matter consisted of—

Organic matter	5·95[3]
Mineral matter	435·25
Total	441·20

[3] Equal to 1·3 per cent.

The sedimentary matter in this case was found to consist mainly of mineral matter intermixed with many diatomaceæ, a few infusoria, decaying fragments of vegetable tissue, but no distinct microscopical evidence of sewage contamination was obtained.

Lastly, the water obtained from near the Beckton gasworks was thick and of a somewhat dark colour, but less so than the samples from the outfalls. No decided odour of gas products was perceptible. After subsidence of the suspended matter, the water was found to present a faint yellow tinge, and was only slightly opalescent. Its analysis gave the following results:—

	In 100,000 parts.
Free ammonia	0·1182
Albuminoid ammonia	0·0386
Chlorine	451·56, equal to
Chloride of sodium	744·12
Sulphuric acid	53·99
Total solids	937·2

Specific gravity, 1·0063

The suspended matter consisted of—

Organic matter...	9·70[4]
Mineral matter...	48·02
Total	57·72

[4] Equal to 16·8 per cent.

Examined with the microscope, the suspended matter was found to present the same appearances as that obtained from the waters collected at the two outfalls under the corresponding circumstances of weather and tide, the only microscopical evidence of sewage contamination being a few hairs of wheat, which, from the silica entering into their composition, decompose only with difficulty.

We will now proceed to state the results of the chemical and microscopical examination of the three samples of *mud* obtained.

The sample from the Northern Outfall was black, fetid, and possessed a distinct odour of coal-gas; it was observed to emit numerous bubbles of gas, resulting from the decomposition of the organic matter present in it, and which contained sufficient sulphuretted hydrogen to speedily blacken some white paper steeped in a solution of acetate of lead. When stirred a further quantity of gas was evolved. Treated with a few drops of diluted hydrochloric acid, a very copious elimination of sulphuretted hydrogen took place. The mud was found to consist of—

Organic matter	4·14 per cent.
Mineral matter	95·86 ,,

On microscopical examination there were detected in it numerous decaying fragments of vegetable tissue, most of them much altered by decomposition, and nearly all of a black colour from the presence of sulphide of iron, many diatomaceæ, but no living infusoria. It is to be further observed that the mud did not exhibit those abundant microscopical evidences which are found in sewage and most sewage-polluted water; nor was it to be expected that it would do so, as the organic matters, such as the altered muscular fibres, husk of wheat, cells of potato, and other vegetable, &c., when once immersed in the mud, would quickly become so infiltrated, altered in colour and texture, and be so much decomposed as to be no longer recognisable. It is only in very recently deposited sewage mud that such evidences are to be discovered.

The sample of mud from the Southern Outfall was also black and offensive, and it furnished indications of the presence of sulphuretted hydrogen, and emitted bubbles of gas, but in far less quantity than the sample from the Northern Outfall. It gave, on analysis, the subjoined results:—

Organic matter	16·54 per cent.
Mineral matter	83·46 ,,

The microscopical elements detected in this mud were the same as those found in the mud from the Northern Outfall. At the spot where the *Princess Alice* sank but little mud was found, the deposit dredged up consisting of stones or pebbles with a small quantity of blackish and somewhat offensive mud. The latter, on analysis, yielded the following results:—

Organic matter	17·31 per cent.
Mineral matter	82·69 ,,

Examined with the microscope, it was not found to exhibit any special features of interest.

The second visit to the scene of the accident was made on the 4th October, at the time of the ebb tide, and while the sewage from the outfalls was being discharged. The weather was warm and the air still. The temperature of the air was 16·80° C., and that of the water 14·40° C. It will be remembered that the disaster to the *Princess Alice* occurred at about two hours after the ebb tide had commenced to run.

Samples of water were on this occasion also obtained from the Northern Outfall, from the locality of the accident, and off the gasworks, but none was taken from the Southern Outfall, it being found on our arrival there that the sewage was not being discharged. A sample was, however, obtained during the escape of the sewage on the 8th October.

These were all in like manner subjected to chemical analysis and microscopical examination, with the subjoined results:—

The sewage from the Northern Outfall was escaping obviously in a vast and continuous volume, the river by its discharge being rendered of a black and inky colour for a considerable distance; a very obvious line of demarcation was observable between the sewage-mixed water and the unmixed river water. In the sewage mixture very large quantities of sewage in a solid form, including even fæcal matter, were to be seen. The smell emitted was at the same time very offensive, the odour of sulphuretted hydrogen being plainly detectable, and bubbles of gas were observed constantly rising to the surface of the water.

The water, as collected from the *Northern Outfall*, was black and offensive, and evidently consisted of diluted sewage. After subsidence, the water itself was observed to be of a yellowish tinge and very opalescent. Its analysis yielded the following results:—

	In 100,000 parts.
Free ammonia	0·2370
Albuminoid ammonia...	0·1120
Oxygen required	0·36
Chlorine...	452·98, equal to
Chloride of sodium	756·46
Sulphuric acid	53·16
Total solids	989·2

Specific gravity, 1·0065.

Suspended matter—

	In 100,000 parts.
Organic matter...	8·38[5]
Mineral matter	18·92
Total	27·30

[5] Equal to 30·7 per cent.

On examination with the microscope, the sedimentary matter was found to abound in evidences of sewage contamination, including much muscular fibre (sometimes even striated), the husk of wheat, cells and fragments of potato and other vegetables, as also living diatomaceæ, fungi, and infusoria of many species and genera. Some of the principal constituents are well exhibited in Fig. 2.

FIG. 2.—*a*, Fragments of altered muscular fibre. *b*, Portion of husk of wheat. *c*, cell of potato. *d*, Fragment of decaying vegetable tissue. *e*, Cotton fibres. *f*, *g*, *h*, Infusoria. *i*, Diatomaceæ. *j*, Earthy and sandy matter.

The water collected at the *Southern Outfall* on October 8th was of a blackish colour and disagreeable odour. After subsidence it was found to present a yellowish tinge, and to be somewhat opalescent. The results of its analysis were as given below:—

	In 100,000 parts.
Free ammonia	0·4968
Albuminoid ammonia...	0·1016
Oxygen required	0·44
Chlorine...	665·2, equal to
Chloride of sodium	1096·2
Sulphuric acid	81·08
Total solids	1382·3

Specific gravity, 1·0091.

Suspended matter—

Organic matter...	8·30[6]
Mineral matter...	13·20
Total	21·50

[6] Equal to 38·6 per cent.

Under the microscope this water presented the same abundant evidences of sewage contamination as that collected from the Northern Outfall under the same circumstances—namely, muscular fibre and the several vegetable structures before mentioned.

The water collected at the place of the accident was thick, blackish, and of an unpleasant smell. It contained—

	In 100,000 parts.
Free ammonia ... —	0·0891
Albuminoid ammonia...	0·0475
Oxygen required	0·20
Chlorine...	434·5, equal to
Chloride of sodium	716·0
Sulphuric acid	52·68
Total solids	947·6

Specific gravity, 1·0063.

Suspended matter—

	In 100,000 parts.
Organic matter...	38·75[7]
Mineral matter...	256·35
Total	295·10

[7] Equal to 13·1 per cent.

The analysis of this water, it will be seen, corresponds (apart from the amount of salt water) very closely with that obtained at the first visit from the same spot, the one being collected at the flood, the other at the ebb tide. Examined with the microscope the sedimentary matter was found to contain many diatomaceæ and infusoria, with a few fragments of disintegrating vegetable tissue interspersed among the particles of mineral matter; but no specific evidence of suspended sewage contamination, such as the presence of muscular fibre, husks of wheat, cells of potato, &c., was discoverable.

FIG. 3.—*a*, Infusoria. *b*, Diatomaceæ. *c*, Fragment of decaying vegetable tissue. *d*, Spiral vessels of vegetable tissue. *e*, Cotton fibres. *f*, Earthy and sandy matter.

The fourth sample, taken near the *gasworks*, did not contain much deposit, was but slightly opalescent, and emitted but little smell, and none whatever of gas pollution. On analysis it was found to contain—

	In 100,000 parts.
Free ammonia	0·0920
Albuminoid ammonia...	0·0432
Oxygen required	0·24
Chlorine...	418·9, equal to
Chloride of sodium	690·3
Sulphuric acid	50·52
Total solids	910·0

Specific gravity, 1·0061.

Suspended matter—

	In 100,000 parts.
Organic matter...	0·20[8]
Mineral matter...	19·65
Total	19·85

[8] Equal to 1·0 per cent.

There were detected in it with the microscope very many diatomaceæ, numerous infusoria, few black and decaying pieces of vegetable tissue, including hairs and portions of husk of wheat, but no other direct microscopical evidence of sewage contamination.

Corresponding samples of mud were obtained from the two outfalls, and from the river near the Beckton gasworks. The two attempts to obtain mud at the spot where the *Princess Alice* sank (which, it must be remembered, was nearly in mid-stream) failed entirely on this occasion, nothing but clean stones and pebbles being raised.

The sample of mud from the *Northern Outfall* was black and exceedingly offensive. The jar containing it was covered with a piece of moistened bladder, which, after a few hours, was observed to become greatly distended with gases generated from the mud. This sample of mud continued to evolve copiously a mixture of different gases for several days after it was collected. The mud itself, on chemical analysis, was found to consist of—

Organic matter	9·89 per cent.[9]
Mineral matter	90·11 per cent.[10]

[9] Containing 0·29 per cent. of nitrogen, equal to 1·83 per cent. of albuminous matter.
[10] Containing phosphoric acid 0·48 per cent.

The organic matter was not determined until some days after the mud was collected, during which it had continued to evolve copiously gaseous products; hence the proportion of organic matter given in the analysis would be somewhat below that which was present at the time it was obtained.

The sample of mud procured from the *Southern Outfall* was black and offensive, but not so much so as that from the Northern Outfall, and there was scarcely any disengagement of gas. Examined with the microscope, it was found to contain very many blackened fragments of decaying vegetable tissue and numerous diatomaceæ. Its analysis furnished the following results:—

Organic matter	18·72 per cent.[11]
Mineral matter	81·18 per cent.[12]

[11] Containing 0·57 per cent. of nitrogen, equal to 3·61 per cent. of albuminous matter.
[12] Containing phosphoric acid 0·59 per cent.

This mud was also not submitted to analysis for some days after it was collected.

The mud from near the *Beckton gasworks* was likewise black and offensive, and it contained numerous fragments of decaying vegetable tissue and many diatomaceæ, but it did not evolve, even after being kept for a time, any perceptible amount of gas. It contained—

Organic matter	13·78 per cent.[13]
Mineral matter	86·22 per cent.[14]

[13] Containing 0·67 per cent. of nitrogen, equal to 4·23 per cent. of albuminous matter.
[14] Containing phosphoric acid 0·52 per cent.

The nature of the gases evolved from mud containing organic matter under favourable conditions is well known, and the principal consist of marsh gas, carbonic acid, nitrogen, and sulphuretted hydrogen.

Now the most important and injurious of the above-named gases is sulphuretted hydrogen, and, as we have seen, the samples of mud obtained from the outfalls, especially from the Northern Outfall, evolved this gas, and when brought into contact with hydrochloric acid very large quantities of it were disengaged.

But the examination of the muds above referred to, and of the gases emitted therefrom, furnishes but a feeble idea of the quantity of gas actually evolved by a collection or bank of sewage-formed mud, such as that which existed at and near the Northern Outfall. We found that when this mud was disturbed, as by stirring with a pole, very large quantities of gas were immediately disengaged, and rose to the surface of the water, escaping in innumerable large bubbles. There was evidently going on in this mud a very large generation of the gases, resulting from the decomposition of animal and vegetable matter. Some of these gases, as they are formed, are absorbed, carried away by the surrounding water, and never reach the surface at all, or if they are generated in too large quantity for immediate absorption, or if they are insoluble in water, they rise to the surface in bubbles.

Having thus completed the examination and analysis of the several waters and muds obtained, we will now proceed to summarise the results, after which we shall be in a position to apply these results to the question of the sewage

pollution of the Thames in the neighbourhood of the outfalls, and to the further question of how far the condition of the river at the time of the accident exerted an injurious effect on the people who were so disastrously plunged into it.

It will be remembered that the *first series* of samples of water were obtained during an unusually high and strong flood tide, when the volume of water in the neighbourhood of the outfalls was greatly augmented, and some time after the sewage had ceased to be discharged into the river. Their analyses show (1) that the whole of the waters were more or less discoloured and opalescent, and contained much free and albuminous ammonia, especially the two samples from the outfalls; (2) that they contained a considerable quantity of suspended matter, mineral and organic; (3) that they were largely admixed with sea-water. Now the opalescence of the waters, as well as the large amount of free and albuminoid ammonia, as also the considerable proportion of suspended organic matter, sufficiently prove the contamination of the water with nitrogenous organic, and most probably sewage matter, notwithstanding the very favourable circumstances under which these samples were obtained.

Of the three muds examined, two—namely, those from the outfalls, and especially that from the Northern Outfall—presented evidences of sewage contamination in the black colour, fetid odour, and the elimination of the gases resulting from the decomposition of organic matter.

As already remarked, but little mud was found at the spot where the *Princess Alice* sank, and this, although of a dark colour and offensive smell, did not present any special features of sewage-contamination. The comparative absence of mud from this locality was doubtless to be attributed to the circumstance that the vessel sank in mid-stream, where the force of the current, at this particular spot, is strongest.

The *second series* of samples were, as already stated, obtained at ebb tide—that is to say, when the water was flowing towards the sea, when the volume of water was greatly lessened, and during the time of the discharge of the sewage from the outfalls. Their analysis furnished results in some respects similar to those obtained on examination of the first series, but presented certain additional characteristics. When collected, those from the outfalls (and especially that from the Northern Outfall) were thick, turbid, dark-coloured, and contained much organic and inorganic matter in suspension, while the clear water was opalescent and of a yellowish colour. Examined with the microscope, abundant evidence of the presence of sewage was obtained, such as much-altered muscular fibre, husks of wheat, cells of potato and other vegetables, &c. The two remaining samples of water—one from the locality of the accident, and the other from near the Beckton gasworks—were both opalescent after subsidence, but they contained much less free and albuminoid ammonia; and while the suspended matter in that from the place of the accident was very considerable, and contained 13·1 per cent. of organic matter, that from the Beckton gasworks was very much less in quantity, and contained only 1 per cent. of organic matter. Neither of these waters presented any marked microscopical evidence of recent sewage-contamination.

Of the three *muds* examined, that from near the Northern Outfall was very black, fetid, and evolved a considerable quantity of gases resulting from decomposition, and amongst them sulphuretted hydrogen in very appreciable amount. That from the Southern Outfall was also black and fetid, but less so than the other sample, and it evolved very much less gas, but yet sufficient to blacken quickly a solution of acetate of lead.

Such are some of the principal results of the analyses of the waters and muds, and they certainly establish the fact of a very considerable sewage-pollution of the Thames at, and near, the Northern and Southern Outfalls. At the Northern the odour emitted during the escape of the sewage was exceedingly offensive; that of the Southern certainly much less. During the flood tide but little odour was perceptible; but then it must be remembered that no sewage was being discharged, that the day was cold, and that a strong wind was blowing. Had the examination been made during the heat of summer, if the testimony of many observers is to be relied upon, a very different state of things would be found to have existed; and we do not well see how it could have been otherwise, considering the amount of solid matter in the sewage annually discharged from the outfalls into the Thames, which, according to one authority, is stated to be 64,250 tons, and by another to be 4,465,000 tons. We do not consider either of these estimates very strictly reliable, but they serve to convey some notion of the suspended matters daily cast into the river, and which is stated to contain as much as 64 per cent. of organic and decomposable matter, and which therefore, if collected and distributed over the land, would serve to manure and render fertile a large tract of country, and thus considerably augment our food resources. But then it must be remembered that the above quoted estimates of quantity do not include the soluble constituents of the 120,000,000 gallons of sewage discharged daily, with its free ammonia, albuminoid substances, and soluble phosphates, &c., which constitute by far the most valuable portions of the sewage, and some of which contribute materially to the pollution of the water.

The advocates for the continuance of the system of discharging the sewage of London into the river at Barking and Crossness affirm two things. First, that the sewage quickly makes its way into mid-stream, and is rapidly carried out to sea, very little deposit of sewage taking place; and, second, that much of the sewage disappears by oxidation, and by the self-purifying powers which rivers thereby possess. There is no doubt some amount of truth in both these assertions, but no sufficient proofs have as yet been advanced to show that any very considerable amount of solid sewage does thus make its way into the sea, while it is certain that a very large deposit of sewage matter does really take place in some localities. Nor could it well be otherwise. The water of the Thames almost always contains a large quantity of mineral matter; this, in consequence of the motion communicated to it by the tides and the innumerable ships and steamers upon its surface, is constantly being stirred up, and is as constantly falling to the bottom again, and in subsidence cannot fail to carry down with it a large proportion of the suspended organic matter contained in the metropolitan sewage. It is in this manner that sewage mud-deposits are formed in localities removed from the influence of tidal currents. Then, as to the second affirmation, that much of the sewage is destroyed by oxidation, it must be remembered that we do not possess any satisfactory or conclusive experiments showing the extent of the operation of this cause in the removal and destruction of sewage. On the other hand, it is quite certain that very much of the suspended organic matter is not destroyed by oxidation, but by the process of putrefaction, and it is this which gives rise to the offensive odours of sewage, and to the formation of the various sewer gases, which, as we have seen, are so abundant in the mud at the outfalls, especially that at Barking.

The Northern Sewage Outfall was opened only in the year 1864, and the Southern Outfall in 1866; prior to those periods, it will be remembered, the sewage of London, with its millions of inhabitants, was cast into the river in the very heart of the city or in its immediate precincts. But, *mirabile dictu*, a very few years before the dates referred to, a large portion of the water supplied to the inhabitants of London for drinking, cooking, and other domestic purposes, was actually taken out of the river Thames within the metropolitan area; and so badly and inefficiently was it filtered that, as served to the public by some of the Companies, it was opalescent and milky to the eye, sometimes offensive to the smell, and abounded not only in innumerable living organic productions, but in tangible evidences, such as the presence of partially-digested muscular fibre and tissues of vegetable, plainly discernible by means of the microscope, of fæcal contamination. At length the evil, as it affected the river itself, rendering it foul and abominable to the smell, and as it also poisoned the water given to the public to drink, became intolerable, and the sewage was at length removed further down the river to Barking and Crossness, where no doubt it is poured into a much larger volume of water, and where consequently there is greater room for its diffusion and dispersion. Still it is unquestionable that even here it has produced evils of no mean magnitude and importance, that it has rendered the atmosphere in the neighbourhood of the outfalls offensive in hot weather, and that it has greatly fouled the water of the river.

But there is a special evil attending the discharge of sewage matter into salt water to which we may now advert. One of the gases formed from the decomposition of organic, and especially animal organic matter, is sulphuretted hydrogen; but when organic matter comes into contact with a

soluble sulphate, such as is so abundantly contained in sea-water, the sulphuric acid is reduced, sulphides and sometimes sulphuretted hydrogen being formed and eliminated. Thus we have in the case of the discharge of the sewage into the Thames at Barking and Crossness, where there is always a huge admixture of sea-water, an additional and almost unlimited source of the production of this gas. Fortunately, the whole of the sulphuretted hydrogen thus formed does not reach the surface of the water, or the atmosphere in some cases would certainly become poisonous. To show the large quantity of sulphides contained in sewage mud, it is only necessary to add a little dilute hydrochloric acid to a small quantity of the mud, when the sulphuretted hydrogen is evolved in large quantities. Now here we have an explanation in some cases of the fetid emanations proceeding from the banks of rivers into which acid-refuse liquors are cast. If any such liquor made its way into the mud accumulated at the Northern Outfall, and there were any people near to it at the time, serious consequences could scarcely fail to ensue.

THE GENERAL COUNCIL OF MEDICAL EDUCATION & REGISTRATION.

Third Session 1878.

THURSDAY, OCTOBER 17TH.

THE Medical Council met to-day to take into consideration the Dentists Act of 1878; Dr. Acland (President) in the chair. All the members were present, including the Rev. S. Haughton, M.D., the new representative of the University of Dublin.

THE PRESIDENT'S ADDRESS.

The PRESIDENT said: I greatly regret that I have been obliged to summon the Council for the third time this year, at a period which I fear is to some members inconvenient, and at a charge to our funds which we all must deplore. But no other course was open. Many communications have, it is true, been received by me from various quarters in regard to the subject of a meeting. Some were to the effect that a meeting was not required; some that it was necessary; some that, if convoked, it should be restricted to the consideration of the Dentists Act; and some that it should be at liberty to take up any subject within the scope of the Council's legal functions. It has been urged that the President has no power, even if it were desirable, to summon the Council for the purposes of the Dental Act; and that, if the Council had to meet for such a purpose, it must be called together by the Secretary of State for Home Affairs, who has, I venture to say, no function whatever in the matter. I should not advert to these different views of our duty were it not that, as the Council's responsibilities yearly increase, it is working out new precedents and usages. It appears incumbent on me, therefore, to state to you the view I take of the circumstances which have induced me to bring you together at this unusual period. They can be set forth very briefly. A Government Bill for the Amendment of the Medical Act of 1858 was brought into the House of Lords early in the last session. After various important changes it passed that House. It was a Bill intended to meet all outstanding needs as regards the main duties assigned, or to be assigned, to the Medical Council of Education of the United Kingdom. It aimed at providing permanent principles for the future of national examination in medicine, for the education of midwives, for the education of dentists, for the just requirements of foreign and of colonial practitioners; besides sundry other details. The Council, which has discussed the subjects of the Bill in three consecutive sessions, is aware that there was no general consent up to the end of July as to the further changes which the Bill might require in the House of Commons. The Bill was therefore reluctantly withdrawn by the Government at the end of the session, after so much labour and care had been bestowed on it alike by the Government and yourselves. This result has not left the affairs of the Council as they were, nor as they had been left when Lord Ripon's Bill had been withdrawn under not dissimilar circumstances. A private Bill, confined to regulating the education and registration of dentists, not being opposed, was passed. It assigns to this Council, as the larger Government Bill had done, duties as regards dentists which require nearly the same machinery as that for regulating the education and registration of medical practitioners. Opinions may and do differ as to whether it is to the advantage of the Council that new duties should come thus upon it, without completely remedying the defects in medical law which it has been so many years anxious to remove. But so it is. The outcome of the procedure of last session is, that the Legislature has imposed upon us the administration of the profession of dentists in Great Britain. We are required, without delay, to give the directions requisite for putting the Dentists Act in force. The Registrar has exercised great diligence in preparing everything for your judgment and your orders; and, acting under instruction of the Executive Committee with the advice of the solicitor of the Council, has already provisionally registered 900 persons who have satisfied the conditions of the Dentists Act. The business which the Council is specially required to consider under the Act relates—1st, to the form and manner of registration; and, 2nd, to the delegating of power to a committee, which has to be appointed under Clause 15 of the Dentists Act, or to the Executive Committee, by virtue of the provisions of the last part of Section 9 of the Medical Act of 1858. Orders once issued by the Council on these fundamental points, the detailed execution of the Act need not fall further on the full Council. The extent, indeed, to which it will do so rests with the pleasure of the Council, except as regards the actual order for the erasure from the Dentists Register of the name of a practitioner convicted of crime or guilty of disgraceful conduct. I should not have recapitulated these merely historical facts were it not that they opportunely relate to a motion of which notice has been given, that the meeting now take up the subject of the revision of the constitution of the Council. This subject has already been referred to the Executive Committee. The gravity of the duty imposed on that Committee does not seem less after the recital that has now been made. The functions of the Council are manifestly in a transitional state, and those members who have followed the new work imposed on it by the Dentists Act will probably, when they reflect on the future weight which must still, as time goes on, come upon the Medical Council of Great Britain, be the first to desire that a thorough and searching inquiry should be made under the order to make "a revision of the Council," as to what methods will increase its working power, diminish its expense, and give just influence to its authority. I wish I could on this occasion have passed the subject wholly by. I join with all those who have the interest and honour of British medicine at heart in the opinion that it is no light thing for us to tender advice to the Government as to what should be the constitution of a Council—whether the present constitution or some other—which, in the progressive state of human knowledge, of scientific thought, and of transitional education, is in future to sit in judgment on all of the Universities of the land, and on all the institutions that have heretofore fostered and maintained the character of British medicine and surgery; to a body, moreover, to which are not seldom committed negotiations with the Government, and delicate questions relating to our medical brethren and the public, at home, in foreign countries, and in the colonies. If I were to venture on one observation as regards this duty of framing a report on the revision of the Council, it would be that, while the task of revision should be as speedily executed as is consistent with due deliberation and inquiry, it should above all things be thorough and complete, free from every prejudice, in a wholly national spirit, and such as, for years to come, to set the question thoroughly at rest. As I felt bound to allude to this question, so I am strongly tempted to enlarge upon it. But I forbear, as the subject is now in the hands of the Council, and any opinion on its merits would be wholly beside my province. Only one thing more, in conclusion, as regards this present meeting. Though it was clearly the legal duty of the President to summon this meeting for the consideration of the Dentists Act, it would as clearly be unconstitutional for him to attempt to

impose limits on the will of the Council when once it has met. Whenever the Council has pronounced its will, it will be for us all to promote the fulfilment of its desires, with as much speed as is consistent with success to its labours.

After receiving a report from the Registrar as to what has been done in regard to the registration of dentists, the Council resolved itself into committee to consider the Dental Act. A motion was made by Dr. Wood, proposing a form of register, upon which a long discussion took place as to whether there should be an additional column for the insertion of higher qualifications. It was ultimately agreed that there should be such a column, and it was further resolved that counsel's opinion should be obtained as to what diplomas, &c., should be inserted in the additional column. A motion was passed, legalising the provisional registration of dentists already made by the Registrar.

Several other motions were passed with reference to the publication of the Dental Register, the payment of fees, &c.

The Executive Committee reported that the question of the constitution of the Council had been under their consideration, but they were not at present prepared to present a final report on the subject. The Executive Committee was then re-elected, and the Council adjourned to Friday.

Correspondence.

"Audi alteram partem."

YELLOW FEVER IN THE SOUTHERN STATES OF AMERICA.

To the Editor of THE LANCET.

SIR,—In your impression of the 7th inst., which has just reached my table, I observe a brief notice of the great epidemic of yellow fever which is now prevailing with such fatality in the Southern States of the Union. Since some features are not reported with marked accuracy in your columns, others of much importance have been overlooked, and information on the subject seems desirable, I have thought a brief account of the origin and extent of the epidemic from one of the States in which the disease is prevailing might interest your readers at this time.

Yellow fever is not indigenous in any portion of the United States, but prevails to a limited extent almost every year during the heated term in the seaport cities on our southern coast. In June of the present year the steamship *Emily B. Souder* landed at New Orleans from some infected port of the West Indies. After reaching port some members of the crew were seized with yellow fever and died. Early in July numerous cases of, and deaths from, yellow fever began to be reported at the office of the Board of Health in New Orleans, and in a few weeks the disease was declared to be epidemic. New Orleans is a city with a population of 200,000, situated upon the bank of the Mississippi river near its mouth, and is connected by rail and by lines of steamboats with all the principal cities and towns of the Southern States. As a focus of yellow fever infection it has every facility for disseminating the germs with rapidity throughout the States. Early in August the disease appeared in Grenada, an inland town of Mississippi, with an estimated population of 2000. This town seems to have been in a miserable sanitary condition, and furnished a nidus for the development and propagation of the disease in a degree of malignity almost unprecedented in this country. Quite a number of the inhabitants of this ill-fated town fled in the early onset of the epidemic, a large number have died, and at this time not more than thirty souls are remaining. The next place attacked was Memphis, Tennessee, a city of 40,000 inhabitants, situated on the bank of the Mississippi, and in direct communication with New Orleans by river and by rail. As soon as the disease made its appearance in Memphis, about one-third of the entire population, by advice of the physicians, left the city. Many of the refugees were attacked with the disease at distant places. The disease has continued to prevail in that city with shocking fatality. Deaths have occurred with such rapidity that the large number of men employed are unable to bury the dead with sufficient promptness, the bodies, in many instances, reaching an advanced stage of decomposition before burial can be obtained. All the horrors of the London plague have been, as it were, re-enacted in this ill-fated city. Soon after Memphis had been invaded by the great scourge, Vicksburg, Mississippi, was numbered among the stricken cities. This city is on the bank of the Mississippi river several hundred miles below Memphis, and has a population of 12,000. The severity and fatality there are not so great as in the other infected cities. The pestilence has also invaded the following towns, where it continues to prevail with great fatality:—Holly Springs, Miss., pop. 2500; Port Gibson, Miss., pop. 2000; Canton, Miss., pop. 2000; Greenville, Miss., pop. 900; Brownsville, Tennessee, pop. 2500; Hickman, Kentucky, pop. 1200.

The following are some of the climatic relations of the principal infected cities:—

	Longitude.	Latitude.	Elevation.
New Orleans (Louis.) ...	90° ...	29° 57′ ...	10 feet
Memphis (Tenn.)	90° ...	35° 8′ ...	262 ,,
Vicksburg (Miss.)	90° 56′ ...	32° 23′ ...	280 ,,
Grenada (Miss.)	90° 8′ ...	33° ...	225 ,,
Holly Springs (Miss.) ...	89° 30′ ...	34° 45′ ...	270 ,,
Hickman (Kenty.)... ...	89° 5′ ...	36° 31′ ...	305 ,,

The epidemic now prevailing has manifested some unusual characteristics worthy of mention. Hitherto those members of the African race who retain the blood of their race free and unmixed with that of other nationalities have enjoyed an immunity from yellow fever, and have exposed themselves to its contagion with impunity. At New Orleans, Grenada, and Memphis they have been stricken down along with the whites, and have died in large numbers. The creoles of Louisiana—native-born inhabitants of French and Spanish descent—have also had a similar exemption from its contagion; but during this epidemic their homes have been invaded and whole families swept away.

The writer cannot forbear mentioning in this connexion that in no reported instance has any member of the medical profession deserted his post, or shrunk from the discharge of duty. A large number have been stricken down with the disease in the midst of their efforts to save others, and many have forfeited their lives. Their brethren in other places have promptly volunteered to take the post thus made vacant by death, and have fearlessly gone to the infected districts with help in one hand and their lives in the other. In the meantime, both at Memphis and New Orleans, every effort is being made, by diligent and faithfully recorded observations and post-mortem examination, to collect every attainable fact which can shed light upon the nature, cause, and treatment of the great scourge. In New Orleans the cold bath and transfusion have been brought to bear upon the treatment of the disease, the results of which will doubtless be made known in detail to the profession.

With much respect, I am, Sir, yours obediently,

L. S. MCMEURTRY, A.M., M.D.

Danville, Kentucky, U.S.A., Sept. 19th, 1878.

CARBOLIC ACID IN SMALL-POX.

To the Editor of THE LANCET.

SIR,—I, as *the first* to suggest the employment of carbolic acid externally in small-pox, have naturally taken a deep interest in the correspondence which has been going on in your columns for some weeks past, and it was my intention not to intrude any remarks of mine upon the subject, as it was sufficient satisfaction to me to find that my views have been endorsed by so many able observers; but several of my friends have been indignant that any credit which might accrue to one who promulgated the treatment should be taken away from me and be assumed as a right by another. As Dr. Eade, of Norwich, has laid claim to having been the first to suggest the remedy, I beg politely to refer him to the *British Medical Journal* for Nov. 25th, 1876, where he will find a paper by me on the subject, a copy of which I beg to send you. You will see that the first case I quote in which this treatment was applied bears the date of December, 1871. I may add, Sir, that the paper referred to was translated into the German and French journals, and I was told by a friend, who is a Spanish merchant, that he had observed it copied

into some of the Spanish journals. Trusting that you will be able to give this letter a place in your issue of Saturday next,

I remain, yours obediently,

ROBERT BELL, M.D.

Lynedoch-street, Glasgow, Oct. 14th, 1878.

ST. THOMAS'S HOSPITAL.

To the Editor of THE LANCET.

SIR,—I am directed by the Treasurer, Mr. Ald. Stone, to forward to you the enclosed statement, with a request that it may appear in the next edition of THE LANCET.

I remain, Sir, yours truly,

Oct. 10th, 1878. FRED. WALKER, Steward.

Plan for providing Refreshments for Out-Patients and Casualties.

The Out-Patient Department of St. Thomas's Hospital is very extensive, and the advice of the medical staff in attendance in this section of the hospital is much sought after by a very large number of persons, the total attendance of out-patients and casualties during the last year being nearly 140,000; but this does not represent the total number of applicants for out-patient letters, as many of these are not considered fit cases for hospital treatment. It requires the daily attendance, for many hours, of a large staff to examine and prescribe for these patients, some of whom come from considerable distances, and are necessarily detained at the hospital, waiting their turn, in rotation, for medicine, &c., after being prescribed for by the medical staff. It frequently happens that these patients have left home hurriedly, without taking proper nourishment, and become faint from exhaustion before leaving the hospital. In view of this the Treasurer and Committee have made arrangements for supplying them with refreshments—say tea, coffee, milk, rolls, cakes, &c.—at a small fixed charge, so that such as require it may obtain a simple meal at a small cost, and thus remove the excuse they now have of resorting to public-houses for food and drink before returning home. Somewhat similar arrangements have been adopted at Guy's Hospital.

Obituary.

ARTHUR BROWNE STEELE, L.K.Q.C.P.I., M.R.C.S.

MR. STEELE was the son of a practitioner at Stoke Ferry, Norfolk, in which town he was born in 1820. He received his medical education at St. George's Hospital, where he was fortunate enough to be one of the dressers to Sir Benjamin Brodie. He commenced his career in Liverpool as resident surgeon to the workhouse. He afterwards became one of the parochial district officers, and it was in the performance of his duty that he caught typhus fever, from which he suffered severely. In 1849 he was appointed surgeon to the Bluecoat Hospital and to the Ladies' Charity. The latter office he held for twenty years, attending during that period a large number of difficult and dangerous labours among the poor. In 1869 he became one of the surgeons to the Lying-in Hospital; and in 1870 he was appointed obstetric physician to the Royal Infirmary. Mr. Steele was a hard-working, conscientious practitioner. By diligence he raised himself from the position of general practitioner to that of consultant in obstetric medicine. He took a deep interest in the politics of the profession, and was for years one of the most active members of the British Medical Association. His intellect was essentially logical and forensic rather than inductive. Few could equal him as a speaker in his orderly arrangement of facts and arguments; and it can scarcely be doubted by those acquainted with him that he might have made a really distinguished position for himself as a public speaker if he had chosen any of the professions in which oratory is an essential qualification. For twenty years he lectured with success on midwifery at the Liverpool School of Medicine, and at most professional gatherings he was chosen as one of the prominent speakers. Since 1863 he suffered from renal mischief, of which he died October 9th, 1878. He leaves three daughters and three sons, two of whom are in the medical profession.

The funeral took place on Saturday, at Southdown Cemetery, and was attended by about eighty medical practitioners, besides other mourners.

Medical News.

APOTHECARIES' HALL.—The following gentlemen passed their examination in the Science and Practice of Medicine, and received certificates to practise, on Oct. 10th:—

Harris, Frederick Alfred, St. Thomas's Hospital.
Monté, Peter, Young-street, Kensington.

The following gentlemen on the same day passed the Primary Professional Examination:—

Charles Pardey Lukis, St. Bartholomew's Hospital; John Jones Charing-cross Hospital.

COLLEGE OF PHYSICIANS IN IRELAND.—At the October examinations the following obtained the licences in Medicine and Midwifery:—

Isaac Ashe, James George Beaney, John Joseph C. Burgess, Joseph Henry Irvin, Richard Williams.

QUEEN'S UNIVERSITY IN IRELAND.—The following degrees were conferred at Dublin Castle on the 11th inst.:—

DOCTOR IN MEDICINE.—First Honour Class: James H. Gibson, Lysander Maybury, C. Yelverton Pearson. Second Honour Class: Edward Little, Stephen Little, John F. Tuohy, William Whitford. Unclassed: T. Gelston Atkins, Charles Warke Allison, Theophilus Bacon, Alfred Constantine Bennett, Henry Bingham, Daniel Burdon, John Thomas Collier, Patrick Oswald Considine, William Fleck, Alfred Osmond Geoghegan, Robert Evans Hadden, Charles Hall, James P. Hanrahan, John J. Hartnell, J. Courtney Haslett, William R. Henderson, Francis Thomas Henston, Richard Jennings, John Reid Johnston, Alfred Henry Keogh, Charles Kevin, Pershouse William Langley, Andrew T. Love, Joshua Lytle, Brien Sarsfield M'Dermott, John M'Kinlay, William M'Namara, Edward Magner, Thos. H. May, Daniel O'Connor, Daniel Riordan, William Rowney, William Smyth, James Steel, William Stokes, James Wigmore, Ralph Worrall.

MASTER IN SURGERY.—T. G. Atkins, Theophilus Bacon, Alfred C. Bennett, Daniel Burdon, John William Byers, Patrick Maurice Carleton, Isaac C. Dundee, William Fleck, James Hill Gibson, R. Evans Hadden, James Hanrahan, John Joseph Hartnell, John Courtney Haslett, Wm. Robert Henderson, Francis Thos Henston, Richard Jennings, John Reid Johnston, J. Martin Kennedy, Alfred Henry Keogh, Charles Kevin, Pershouse Langley, Edward Little, Stephen Little, Andrew Thos. Lowe, Joshua Lytle, Brien Sarsfield M'Dermott, Isaac Crawford M'Leary, William M'Namara, Edward Magner, Lysander Maybury, Daniel R. O'Connor, C. Yelverton Pearson, William Rowney, William Whitford, James Young.

THE will of Mr. J. B. Burroughs, F.R.C.S. Eng., of Clifton, has been proved under £90,000.

DR. A. J. MACKINTOSH has received the sum of £12 7*s.* from the Local Government Board for efficient vaccination in his district (sixth time).

THE North Bierley Guardians have completed a new Infirmary to accommodate seventy-two patients, at a cost of about £9000.

THE second Sunday in November has been appointed for the annual collections for the hospitals in Dublin.

MR. GEORGE W. W. FIRTH, F.R.C.S. Eng., senior surgeon to the Norfolk and Norwich Hospital, died on Monday, after a few hours' illness, from heart disease.

THE Leamington Medical Officer of Health (Mr. Joseph S. Baly) reported to the last meeting of the Watch Committee of the Urban Sanitary Authority that there was not a single case of infectious disease in the town.

THE Sheffield Town Council have passed a resolution to apply to the Local Government Board for their sanction to the borrowing of £13,000 for the erection of an Infirmary for infectious and contagious diseases.

THE MIDDLESEX HOSPITAL MEDICAL COLLEGE.—Mr. Joel Harrington Douty has obtained the Entrance Scholarship of £25, and Mr. Walter E. Wynter that of £20, both tenable for two years.

ST. MARY'S HOSPITAL MEDICAL SCHOOL.—Mr. P. P. Whitcombe, of Epsom College, has gained the scholarship in Natural Science; Mr. C. S. Spong, also of Epsom College, the exhibition in Natural Science; and Mr. U. K. Dutt, the extra scholarship in Natural Science.

SMALL-POX IN IRELAND.—Although decreasing considerably in Dublin and Belfast, the disease is spreading to a certain extent in other parts of the country, more especially in Galway and Westmeath. In the former locality twelve deaths have been registered during the past four weeks.

THE rate of mortality in London last week was slightly higher than that of the week ending October 5th—the former being 20·7, the latter 19·8 per 1000. The latest weekly return records 1418 deaths in the metropolis, including 5 from small-pox, 13 from measles, 33 from scarlet fever, 17 from diphtheria, 52 from whooping-cough, 34 from different forms of fever, and 37 from diarrhœa. The deaths referred to diseases of the respiratory organs, which had increased from 158 to 247 in the five preceding weeks, further rose last week to 286.

DEATH FROM CHLOROFORM.—A death occurred last week in the Whitworth Hospital, Dublin, while chloroform was being administered to reduce a dislocation of the elbow of several weeks' standing. Simpson's method of inhalation was used, and the quantity given was much below the average.

DONATIONS ETC. TO MEDICAL CHARITIES.—Messrs. Drummond have given £100 to the Charing-cross Hospital. The Hospital for Women, Soho-square, has received £126, and the North-eastern Hospital for Children £105, out of the "residue" of the estate of Mr. Everitt Allenby, under an award of the Chancery Division of the High Court. Mr. Jeremiah Rotherham, of Upper Clapton, bequeathed £200 to the City of London Hospital for Diseases of the Chest, and £50 to the German Hospital. The General Hospital, Birmingham, has received £100 under the will of Miss Susannah Gardner. The Newcastle Infirmary has become entitled to £10,000, under the will of Mr. William C. Hewetson. Mrs. Lyne Stephens has given £100 to the Norfolk and Norwich Hospital.

Medical Appointments.

ATTHILL, W. E. B., L.R.C.P.I., M.R.C.S.E., has been reappointed Medical Officer of Health for the Faversham Port Sanitary District, at £15 for one year.

BROWN, W. P., L.R.C.P.Ed., L.R.C.S.Ed., L.S.A.L., has been appointed Dispensary Surgeon to the Bradford Infirmary and Dispensary (to visit patients at their homes), at £100 per annum, board and residence, vice Wilmot.

COLLINS, C. E., L.R.C.P.I., M.R.C.S.E., has been appointed Medical Officer for No. 1 District and the Workhouse of the East Grinstead Union, vice Head, resigned.

DANIEL, E., L.R.C.P.Ed., L.F.P.S.G., has been appointed Medical Officer of Health for the Stone Urban Sanitary District, at £30 per annum.

DARTNELL, G. M., L.R.C.S.I. &c., has been appointed Senior Assistant House-Surgeon to the South Dispensary, Liverpool.

DENNISTON, J., M.B., C.M., has been appointed Consulting Surgeon to the West of Scotland Convalescent Homes, Dunoon, Argyleshire, vice Reid, resigned.

EARLE, L. M., M.B., C.M., has been appointed Medical Officer and Public Vaccinator for the Hawkhurst District of the Cranbrook Union, vice Young, resigned.

EVE, F. S., L.R.C.P.I., M.R.C.S.E., has been appointed Curator of the Museum at St. Bartholomew's Hospital and College, vice W. Morrant-Baker, F.R.C.S.E., resigned.

GAMBLE, E. L. G., L.R.C.P.Ed., M.R.C.S.E., L.S.A.L., has been appointed House-Surgeon to the Lincoln County Hospital, vice Carline, resigned.

GRIFFITH, R. P., M.R.C.S.E., L.K.Q.C.P.I., has been appointed Medical Officer and Public Vaccinator for the Llanfihangel District of the Festiniog Union, vice Jones, resigned.

HARRIS, S., M.R.C.S.E., L.S.A.L., has been appointed Medical Officer for the Quorndon District of the Barrow-upon-Soar Union, vice Drew, resigned.

KELLETT, R. G., L.K.Q.C.P.I., L.R.C.S.I., has been appointed Medical Officer of Health for the Halstead Urban Sanitary District, and Medical Referee to the Halstead Branch of the Essex Provident Society, vice Priestley, resigned.

MILLARD, W. W., M.B., C.M., has been appointed House-Surgeon to the Wrexham Infirmary and Dispensary, vice Edgelow, resigned.

MILLIGAN, W., L.R.C.P.Ed., M.R.C.S.E., L.S.A.L., has been reappointed Medical Officer and Public Vaccinator for the Brassington District of the Ashborne Union.

MOORE, C. A., M.B., C.M., M.R.C.S.E., L.S.A.L., has been appointed House-Surgeon and Apothecary to the Leicester Infirmary and Fever-house, vice Hetley, resigned.

PATTINSON, H. A., L.K.Q.C.P.I., M.R.C.S.E., has been appointed Medical Officer of Health for the Seaton Urban Sanitary District, Devonshire, for one year.

PAXON, H. E., M.R.C.S.E., L.S.A.L., has been appointed House-Surgeon and Assistant-Secretary to the West Herts Infirmary, Hemel Hempstead, at £100 per annum, with board, furnished rooms, &c., vice Sutton, resigned.

PLAXTON, J. W., M.R.C.S.E., L.S.A.L., has been appointed Medical Superintendent of the Lunatic Asylum, Ceylon.

POORE, Dr. G. V., has been appointed Physician to the Law Union Insurance Company.

ROSE, F. O., M.B., L.R.C.S.I., & L.M., has been appointed House-Surgeon to the Ladies' Charity Lying-in Hospital, Liverpool.

ROSS, J., M.D., M.R.C.P., has been appointed Assistant-Physician to the Royal Infirmary, Manchester, vice Leech, appointed Physician.

SADLER, H. G., M.R.C.S.E., L.S.A.L., has been appointed Surgeon to the Clergy Orphan School, Canterbury, vice Hallowes, resigned.

SHEPPARD, W., M.D., M.R.C.S.E., L.M., has been appointed Medical Officer and Public Vaccinator to the Hadleigh District of the Rochford Union, vice Grayson, resigned.

SPEAR, J., L.R.C.P.Ed., M.R.C.S.E., has been reappointed Medical Officer of Health for the South Shields Urban Sanitary District, at £300 per annum.

TWIGGE, T. N., M.R.C.S.E., has been reappointed Medical Officer and Public Vaccinator for the Hartington District of the Ashborne Union.

WILMOT, T., L.R.C.P.I., M.R.C.S.E., L.S.A.L., has been appointed House-Physician to the Bradford Infirmary and Dispensary, vice Thom, resigned.

Births, Marriages, and Deaths.

BIRTHS.

ALLEN.—On the 9th inst., at Wellington-square, Hastings, the wife of Bryan H. Allen, M.D., of a daughter.

CONNOR.—On the 9th inst., at St. Andrew-square, Glasgow, the wife of Arthur Connor, L.F.P.S.G., of a daughter.

MCCUTCHAN.—On the 13th ult., at Prospect, Bermuda, the wife of James S. McCutchan, M.B., Surgeon-Major, 40th Regiment, of a son.

WEBB.—On the 5th inst., at Kingsbridge, Devon, the wife of William Henry Webb, M.R.C.S.E., of a son.

MARRIAGES.

BROWN—WATT.—On the 12th inst., at the Retreat, Haddington, N.B., by the Rev. J. C. Brown, LL.D., Samuel Brown, M.B., C.M., of Chester, to Jeanette, third daughter of Mr. James Watt.

LUCAS—COLYER.—On the 15th inst., at the Parish Church, St. Marylebone, by the Rev. Canon Miller, D.D., assisted by the Rev. A. C. Eyre, Henry Owen Lucas, M.R.C.S., eldest son of W. J. Lucas, Esq., of the Manor House, Sutton, to Julia Augusta, fourth surviving daughter of Charles Colyer, Esq., of Dorset-square, and Farningham, Kent.

PRICE—FENTON.—On the 10th inst., at St. Margaret's, Westminster, by the Rev. C. A. Solbé, B.A., Chaplain to the Forces, assisted by the Rev. H. H. Montgomery, M.A., Arthur Price, M.R.C.S., of Waterloo-bridge and of Thornton-heath, Croydon, to Ada Maud, eldest daughter of George Fenton, Esq., M.R.C.S., of Westminster.

PROFFITT—MELLARD.—On the 8th inst., at Christ Church, Stafford, by the Rev. Knight Eaton, Vicar, William J. W. Proffitt, L.R.C.P., M.R.C.S., of Burton-on-Trent, to Jane Elizabeth, eldest daughter of Ralph Mellard, of Stafford. No cards.

WARTENBERG—WATSON.—On the 17th inst., at St. Mark's Church, Crumpsall, by the Ven. Archdeacon Smart, M.A., assisted by the Rev. J. Turner, B.A., Chaplain to the Manchester Royal Infirmary, Victor A. Wartenberg, Surgeon, of Blackpool, to Martha (Lillie), youngest daughter of the late Charles Watson, Esq., of Rose Ville, Broughton-park, Manchester.

DEATHS.

ALDRICH.—On the 5th inst., at Kiveton-park, Rotherham, Frederick Edward Aldrich, M.R.C.S.E., aged 33.

BECK.—On the 6th inst., at Haverhill, James Theophilus Beck, M.R.C.S.E., late of Cambridge.

DAVIS.—On the 13th inst., at Brentford, Edward Davis, M.R.C.S.E., aged 56.

DERINGTON.—On the 5th inst., at Minehead, William Derington, M.R.C.S.E., aged 68.

ENRIGHT.—On the 2nd inst., at Castlematrix, co. Limerick, Cornelius Roche Enright, L.K.Q.C.P.I.

FIRTH.—On the 14th inst., at St. Giles, Norwich, George Warren Watts Firth, F.R.C.S.E.

FOSBROOKE.—On the 8th inst., at Arnold-street, Liverpool, Frederick James Richard Fosbrooke, L.R.C.P.Ed., aged 32.

LOMAX.—On the 4th inst., at Cleethorpes, William John Lomax, M.R.C.S.E., late of Lincoln, aged 63.

MCLACHLAN.—On the 5th inst., at Worthing, Robert McLachlan, L.R.C.S.Ed., of Shelf, Yorkshire.

MARTIN.—On the 3rd inst., at Weston-super-Mare, Edward Martin, M.R.C.S.E., aged 55.

STEELE.—On the 9th inst., at Rodney-street, Liverpool, Arthur Browne Steele, L.K.Q.C.P.I., aged 58.

[N.B.—*A fee of 5s. is charged for the insertion of Notices of Births, Marriages and Deaths.*]

BOOKS ETC. RECEIVED.

A. McCosh Weir: Infantile Mortality and Summer Diarrhœa.
H. G. Guinness: The Approaching End of the Age.
Report and Clinical Records of the Rotunda Hospital. Part I.
C. B. Keetley: The Student's Guide to the Medical Profession.
Dr. M. Kirchner: Die Entdeckung des Blutkreislaufs.
J. F. Knott: The Pathology of the Œsophagus.
C. Roberts: A Manual of Anthropometry.
E. Wilson: Lectures on Dermatology.
Dr. Marsh on Section-Cutting.
J. R. Lane: Lectures on Syphilis.
Revue des Sciences Médicales. Vol. XII.

Notes, Short Comments, and Answers to Correspondents.

THE TEMPERANCE MISSION IN BIRMINGHAM.

THE temperance advocates have been actively at work in Birmingham during the last week, and doubtless the cause will be benefited by the prominence which has been given to the question by the zeal and energy which have been manifested by the clergy and ministers of religion in bringing the subject under the notice of their congregations, as well as by the spirited addresses with which the various platforms have been flooded by the numerous well-known champions of the cause. A conference, presided over by the Rev. Canon Wilkinson, a crowded meeting in the Town Hall, presided over by the Earl of Dartmouth, together with a drawing-room and workshop *seances*, and a women's meeting, presided over by Dr. Heslop, have caused the merits of temperance to be fully presented to the people of Birmingham; and last, but perhaps not least important of all, was a gathering of the medical profession at the Town Hall, under the chairmanship of Dr. B. W. Richardson, of London, who pointed out the necessity for medical men treating alcohol as a drug rather than as an article of diet, and as showing how much injury to individuals, as well as to the general community, arose from its abuse.

Mr. J. Rutherford.—The question was answered in due course.

AN APPEAL.

To the Editor of THE LANCET.

SIR,—I know not whether a charitable appeal may be admitted to your columns; but, if such liberty be given, no appeal more consonant with the purposes to which THE LANCET is devoted can, I think, be preferred than that to which I take the liberty of calling the kind consideration of your readers, of which I beg, as briefly as possible, to state the details.

The unhealthiness of the village from which I write is notorious. Consumption, either of lungs or of the nervous system, is most prevalent. The health of children is low, and complete recovery from serious illness scarcely attainable, except by temporary removal—a remedy, I need scarcely add, within reach of but few of the poor composing the main population of the place.

The need of a small district hospital to supply the requirements of several neighbouring parishes, and of that of which this village forms the centre, being evident, it is proposed to combine this object with the relief of the unusual suffering I have mentioned by placing the hospital on an elevated spot immediately adjacent to the village, commanding also the advantages of the neighbouring telegraph office and railway station. The difficulty of procuring the requisite land in this favoured situation has long stopped the erection of the hospital. Now, however, by a purposed sale of property in and near the village, the site needed, on a breezy height, where a man, a hopeless invalid during his residence in Spofforth, recovered by accidental removal to the spot, is now open. By the purchase of the property in question, not only would such an admirable means of restoration to health be granted to the place, but a beer-shop, one of five in a population of 1000, might, on the expiration of the present lease, be converted into a coffee-house, and a nest of filth, vice, and disease, now existing in the shape of a row of dilapidated cottages (over the horrors of one death in which I must draw a veil), might be broken up for ever.

It is far harder for some to *ask* than to *give*, and, were money in my own hands, this appeal would not have been written. I do not ask for one penny from the well-known, over-taxed generosity of the medical profession; but I do ask all its members who may so sympathise with this appeal as to be willing to bear a tax on personal feeling for the accomplishment of a great good, simply to place the case before those wealthy friends and patients in whom they are aware that a sympathetic element exists, believing, as we must, that not one guinea given for such an object, from the love and for the sake of Him our great example in the healing, at priceless cost, of all sickness, sin, and sorrow, shall, either to petitioner or donor, lose its full reward. It only remains for me to state that the truth of this appeal can be substantiated by all physicians and surgeons of the neighbourhood practically acquainted with the village of Spofforth. If its call be kindly entertained, the famous Eldonian maxim, "Bis dat qui cito dat," would be amply verified in the present instance, the sale of the property in question being very near. In the event of success, the institution which it is desired to establish may, in truth, be named, "built by the medical profession."

Orders, to S. G. Tripp, may be made payal le at the Spofforth Money Order Office. I remain, Sir, yours faithfully,

Spofforth, Wetherby, Oct. 9th, 1878. TRIA JUNCTA IN UNO.

L.R.C.P. Ed.—Colonial and district surgeoncies in South Africa are obtained by application at the Office of the Colonial Secretary, Cape Town. The majority of them average only £75 a year, and form a good nucleus for general practice. They are often advertised in the local (Cape) journals.

Mr. Norton's lecture will appear at the earliest opportunity.

A QUERY.

To the Editor of THE LANCET.

SIR,—Can any of the readers of your journal inform me of a case, either in their own experience or on record, where a blow of the shut fist on the lower jaw, given at one of the angles, caused a double fracture of that bone? Yours respectfully,

October, 1878. A PARISH LEECH.

DEFIBRINATED BLOOD FOR RECTAL ALIMENTATION.

UNDER the auspices of a Medical Society of New York, an extensive traffic in defibrinated blood now goes on in that city, provision being made to deliver the material regularly at the homes of such patients as may need it. The results of experiments in rectal alimentation with blood are occasionally published, from which we will select the following cases:—A patient, suffering from cancer of the stomach, was nourished exclusively per rectum for fifty-four days. During one week of this time the injections consisted of defibrinated bullock's blood, with occasionally a little brandy and milk. In another case it was estimated that of 24 ounces of blood administered daily, more than 16 were absorbed. The injections were generally retained well. In one instance extreme fetor of the dejections was observed. It is stated that, if kept from air and in a cool place, the blood remains fresh for two days.

Mr. Boyle.—We have no knowledge of the particulars named.

ARMY MEDICAL DEPARTMENT.

To the Editor of THE LANCET.

SIR,—As you have on all occasions shown the deepest interest in the Medical Department of the Army, I feel tempted to call your attention to a subject which I do not think has been brought forward with the prominence to which it is entitled, from the fact of its affecting only a portion of the department. I refer to the case of medical officers who have been placed on half-pay in consequence of ill-health. The present rule in the department is, that if a medical officer is unable within six months to return to the station at which he contracted disease, he is forthwith placed on half-pay. Now, half-pay in the Army Medical Department is literally total and absolute loss of service, and thus differs from half-pay as applied to the combatant ranks of the army. Its results press particularly harshly on medical officers who have obtained high places at the examinations for entrance into the department, as it places them at once at the bottom of their lists, and at the end of twenty years from the date of their first commissions they will find their names, month after month, as if stereotyped, in the same place in the Army List (while their juniors advance into the list of surgeon-majors, ranking with lieutenant-colonels), and thus they virtually lose the chance of ever attaining to the rank of deputy surgeon-general. It would be contrary to human nature to expect that men so situated should not be discontented with their position, and would look forward to retirement from the service as a means of escaping the heart-burnings at finding themselves passed over for promotion. I would, therefore, suggest for your advocacy that those medical officers who have been placed on half-pay in consequence of ill-health, contracted in and by the service, might be allowed to reckon the time passed on the half-pay list towards the period required for retirement on permanent half-pay, such time not to exceed two years; this being the time allowed to combatant officers for the recovery of their health. The result of this measure would be to remove from the service men who have but the most remote chances of promotion, and who have already undergone the hardship of having been often obliged to live on the rate of pay given while on half-pay, at a time when additional comforts were required to enable them to regain their health. This measure would cost but little, if anything; it would lessen stagnation in the senior ranks, and would decrease the anomaly of having more surgeon-majors than surgeons in the department; and, finally, it would not interfere with any existing interest.

I am, Sir, your obedient servant,

India, Sept. 15th, 1878. M.D.

Mr. P. Macarthur.—We are unable to find the details of an actual case; but in Hamilton's work on Fractures and Dislocations, and Heath's book on Injuries and Diseases of the Jaws, blows with the fist are enumerated among the recognised causes of fracture. We believe that the celebrated pugilist, Tom Cribb, once broke his antagonist's jaw in a fight.

Toby Belch.—We do not think any such power exists, or is likely to be granted by the Legislature.

Kisber should consult a solicitor as to the personal liability of the overseer, or appeal to the Local Government Board.

LICHEN URTICATUS.

To the Editor of THE LANCET.

SIR,—It would be interesting to know the age of your correspondent's patient suffering from chronic lichen urticatus, as the treatment should be guided much thereby. Presuming the diet, general hygiene, and medical treatment to have been well considered, I should recommend your correspondent to use the compound sulphur and gelatine tepid bath. Formula: Milk of sulphur, two ounces; hyposulphate of soda, one ounce; dilute sulphuric acid, half an ounce; gelatine or patent size, two pounds: to be well mixed with a pint of warm water, and added to the bath, allowing his patient to remain in the same twice a week for an hour. This treatment, with the use of an ointment of hydrochlorate of ammonia, of about twenty grains to the ounce of benzoated lard, daily, I think he will find of much avail.

I am, Sir, yours truly,

JAMES STARTIN,

Surgeon to St. John's Hospital for Skin Diseases.

Sackville-street, W., Oct. 14th, 1878.

To the Editor of THE LANCET.

SIR,—For the relief of lichen urticatus I can recommend your correspondent, "E.W." the following treatment:—Locally, the frequent application of vaseline to allay the constant itching. General treatment with tonics, say, for a child, compound syrup of phosphate of iron, and the diet should be strictly farinaceous.

Yours &c.,

Staines, Oct. 12th, 1878. HENRY APPLETON.

"FINE" MICROSCOPY.

AT a recent trial for murder in one of the Southern States of America, Professor Joseph Jones, who was employed to analyse some pieces of blood-stained wood from the scene of the murder, also portions of the stained clothing of the alleged murderer, not only ascertained that the stains were those of human blood, but also affirmed that the blood in each case was from one and the same individual, who was suffering from intermittent fever. Dr. Jones also expressed his conviction of being able to distinguish between the blood of a negro and that of a white man, but reluctantly confessed that he could not "speak positively with reference to the blood of the different races of mankind." It is right to state that Dr. Joseph Jones is an accomplished physician, and the author of a laborious work on Medicine.

Mr. G. Vyner.—We are not aware.

DEATH FROM CHLOROFORM.

To the Editor of THE LANCET.

SIR,—I beg to enclose notes of a death from chloroform which recently occurred in this institution, if you should think the case worthy of publication.

Michael H——, aged thirty-four, labourer, a tall, well-developed man, was admitted into the Sheffield General Infirmary, under Mr. Barber, on August 30th, 1878, for fistula in ano and ulcer of the right leg. The ulcer, which was of the size of half-a-crown, was due to a severe wound received three years ago. The fistula had existed about the same length of time. In other respects he seemed in robust health.

Oct. 1st.—The ulcer having healed, Mr. Barber decided to operate upon the fistula, and the patient was taken into the theatre for the purpose. Auscultation, as on a previous occasion, revealed nothing wrong about his heart. He was very excited. As he desired to take chloroform, it was administered by myself. It was given to him, as is customary at this institution, on a single layer of lint, upon which it was dropped from an ordinary drop-bottle. He took it quietly and apparently easily for about four or five minutes, by which time about two drachms of chloroform had been dropped upon the lint, when he suddenly struggled violently, his pupils became largely dilated, and his pulse stopped. The galvanic battery was immediately applied to the cardiac region, his chest was severely struck with a cold wet towel, and brandy was injected into his rectum. During this time he was breathing somewhat spasmodically, and, as no improvement was taking place, he was lifted up by the feet for a few seconds, for a short time after which he breathed more regularly, though his heart could not at any time be felt to beat. In the course of about a minute he was again lifted up as before. On this occasion, however, no improvement whatever took place; indeed the only effect produced apparently was great congestion of the head, and in a short time (about five minutes from the time he commenced struggling) he ceased to breathe. Artificial respiration and the galvanic battery were altogether tried for about twenty minutes.

Necropsy, twenty-one hours after death.—Rigor mortis well marked. Pleural cavities empty; no adhesions. Lungs healthy, but highly congested. Pericardium contained no fluid; no adhesions. Heart covered with a large quantity of fat; flabby, pale, and dilated; valves healthy, cavities empty, walls thin. Liver and kidneys highly congested, and their capsules adherent at parts. Spleen firm, congested. Brain slightly congested, and containing a small quantity of fluid in lateral ventricles. Microscopically the heart showed well-marked fatty degeneration.

I am, Sir, yours faithfully,
ARTHUR H. LAVER, House-Surgeon.

Sheffield General Infirmary, Oct. 10th, 1878.

THE CONTAGIOUS DISEASES ACTS.

MR. FRED. W. LOWNDES, of Liverpool, the local Honorary Secretary to the Association for Promoting the Extension of the Contagious Diseases Acts, requests us to state that he will have much pleasure in forwarding, post-free, a copy of the Parliamentary paper alluded to in our issue of the 5th inst. to any of our readers who may wish for it, on receipt of a request addressed to him at 62, Mount-pleasant, Liverpool.

MILITIA SURGEONS.

To the Editor of THE LANCET.

SIR,—The present time seems to be an opportune one for calling attention to, and asking your assistance in, the matter of the militia surgeons, the greater bulk of whom have been deprived of the larger proportion of their incomes, derived from their appointments, under a Royal Warrant of July 19th, 1876. A new Warrant for the Army Medical Department will, in all probability, be shortly promulgated. I am astonished at the apathetic manner in which militia surgeons have of late allowed themselves to be ignored in all discussions on, and suggestions about, the reconstitution of the Army Medical Department. The present Director-General practically ignores all militia surgeons, and persistently refuses to give any medical duties, even for a day, to a militia medical officer at a brigade depôt. Surely the present Secretary of State for War, himself a militia officer, might be induced to investigate our claims, and get for us an actual incorporation, for home and head-quarter duties, of the Militia Medical Department for times of declared national emergency, and also on other oft-recurring occasions, when it is but natural to suppose that the militia surgeon would get a preference, and would be requested to do temporary duty for the army medical officer. I would ask why the one hundred and fifty surgeons whose names appear in the Army List as serving on the Militia Medical Department cannot have justice done them, and duties given them at brigade depôts and other military stations? What need is there to admit men to the Army Medical Department, *without examination*, as suggested by the late War-Office Committee, when you have this number of men of professional standing and experience already attested as willing to serve and supplement an attenuated department? I would also ask what are the Secretary and Committee of the Militia Surgeons' Society of Great Britain and Ireland doing? It seems to me that now is the time to get our claims heard, and that yet another attempt ought to be made to get ourselves reinstated in militia and army medical duties. I know from experience the polite and stereotyped fate of individual applications to the Director-General and Secretaries of State for War; but surely we, militia surgeons, can act as a body, and call on a dormant Society to rouse itself, and endeavour to get for ourselves, as our brethren in the Army Medical Department have done, redress for actual wrong done.

Hoping you will kindly give insertion to this letter in THE LANCET, and that you will induce my brother officers to co-operate at once in real earnest before the next Army Medical Warrant is issued, and also that we shall have a place given to our department in your advocacy of reforms as affecting both the army and the militia in its medical constitution, I remain, yours obediently,

A DEPARTMENTAL MILITIA MEDICAL OFFICER.

September 30th, 1878.

Mr. Jordan Lloyd (f).—Medical officers of hospitals cannot claim fees for evidence in the cases of patients dying in the hospital, if the inquest is held on the premises. Recently fees have been refused also in cases where the inquests have been held at a distance from the institution. This last regulation seems unfair.

Dr. Ernst Groth. — Our correspondent's grievance is a real one, but it is also very common. Medical men who know disease are always liable to the misrepresentation of those who speak with the glibness of ignorance. The remedy would be a legal one, though we should not recommend a legal action, unless the libel were persisted in after due warning.

SERPENTS.

To the Editor of THE LANCET.

SIR,—It would appear that poisonous serpents are among the pests we have to contend with in our new possessions in the East, and when the rains set in and the vegetation revives we shall probably hear more of them. Much attention has been directed to the treatment of snake-bites, but hitherto the results have not been satisfactory. Professor Halford's treatment by the injection of ammonia, which promised so well at first, does not appear to bear the test of wider experience, and the popular treatment by rapid alcoholic intoxication of the patient requires scientific investigation. The local treatment by ligature, scarification, suction, and caustics is the one on which we must chiefly rely. Even if we were able to treat snake-bites satisfactorily, it would be interesting and important to inquire how they can be prevented, and yet I am not aware of the existence of any modern observations on the subject. The ancients, who were very accurate observers, and were less hampered with theories and hypotheses than we are nowadays, believed that nature had made mortal enemies between certain animals and certain things—that, in short, animals, like men, had their likes and antipathies; and they had long lists of things which they believed of use in driving away from their habitations noxious insects, reptiles, and animals. Some of those which they employed against serpents are worth consideration, and should be tested by actual experiment when opportunities offer. Aristotle affirms that serpents may be driven away from a house by the smell of rue (an old anthelmintic). Pliny says that the root of the ash (a cathartic) is excellent against serpents, and that of the holm-oak against scorpions, and he affirms that serpents will not retire under fern (another anthelmintic). Serpents were driven away from houses by the burning of human hair, or of a goat's or a stag's horn (is this the germ of the ammonia treatment?), or by the sawdust of the cedar, or a few drops of galbanum, green joy, or juniper, and it was believed that those who rubbed the body with juniper-seeds were perfectly secure from hurt by serpents. The smell of the herb haxus (?) was said to inebriate aspics, and lay them so fast asleep that they were quite benumbed. Is this snake charming? According to Solinus, we have at our very door a perfect mine of poison for serpents, for he asserts that if a place be strewed with some of "the dust of the Isle of Thanet, in Britain," it will perfectly drive away serpents; and other historians relate that the same object may be effected by using the earth from several other parts of the world, especially the Islands of Ebusus and Galeon. This earth treatment does not, I fear, appear so promising as the more powerful vegetable substances mentioned above; but it is probable that some particular mineral substance is referred to, the source and nature of which was not known. Moreover, we know that some reptiles are peculiar in the choice of their homes; frogs, for instance, do not affect the Green Isle. Your obediently,

Bolton-row, W., Oct. 12th, 1878. CHARLES ROBERTS.

Private.—An *extra*-licentiate of the Royal College of Physicians, London, would, we believe, scarcely be eligible unless he had also a surgical qualification; but the question is one that might be determined by the clerk to the Board of Guardians.

A Convert to Unification is thanked for his communication. We do not, however, agree with him as to the advantages of his professed change, and we see considerable drawbacks to it.

MOSQUITO BITES.

To the Editor of THE LANCET.

SIR,—In reference to mosquitoes, it may not be generally known that these pests have a great dislike to strong odours of oil of cinnamon or cloves. By the use of the latter, many of my shipmates in 1868 were enabled to enjoy the magnificent fishing in the Canadian rivers without getting a single bite. We were in the habit of mixing half a drachm of the oil (not the essence or spirit) with an ounce of spermaceti ointment, and smearing it over our faces and hands. Of course the application is unpleasant; but the scent is agreeable, and few would hesitate when making a choice between the two evils.—Yours &c.,

THOS. CONRY, Staff Surgeon, R.N.

Royal Naval Club, Portsmouth, Oct. 12th, 1878.

Colonial Medical Practitioner has been misinformed. Linacre forms the centre figure, with Sydenham on his right hand, and Harvey on his left. The answer to the second question will be found in Dr. Munk's "Roll of the College of Physicians."

Dr. T. Windham Bax's and *Mr. Trevor Fowler's* communications arrived too late for reply this week. They will be noticed in our next.

SEA-SICKNESS.

To the Editor of THE LANCET.

SIR,—I have seen several communications in your journal recently, suggesting remedies for, or preventives of, sea-sickness. During an experience of six years on the Atlantic as surgeon in charge of large numbers of people, I have had many opportunities of resorting to the many supposed remedies for *mal de mer*—creasote, chloroform, hydrocyanic acid, salt water, champagne, Chapman's ice-bag, &c. &c., but never found any of them worth a second trial. It occurred to me that morphia might have the desired effect, and I gave it a very fair trial. On one passage alone I tried its effects on probably 200 passengers, and I must say it gave me great satisfaction when administered hypodermically over the region of the stomach. In the great majority of cases permanent and complete relief followed its administration, and in the remainder it gave relief for periods of time varying from twelve to forty-eight hours, during which time nourishment could be administered—an immense advantage in cases of mothers debilitated for days, having infants depending on them for support. I was so satisfied with the results of the hypodermic injection of morphia that I never afterwards adopted any other remedy, and found that the epigastric region was the place for operation, having tried the extremities without any but a very poor success.

Trusting some of my seafaring brethren will try the remedy, and inform you of their success,

I remain, Sir, yours truly,
CHARLES J. S. DUGGS, M.R.C.S.E., &c.

St. Louis, Mo., U.S.A., Sept. 22nd, 1878.

ERRATUM.—We understand that Mr. Bryant's "Practice of Surgery" is nearly ready (not now ready, as erroneously stated in our advertisement columns last week).

COMMUNICATIONS, LETTERS, &c., have been received from—Mr. H. Lee, London; Dr. Broadbent, London; Mr. Norton, London; Mr. Nettleship, London; Lieut.-Colonel Hope, London; Mr. Mackintosh, Downham; Dr. Inglis, Edinburgh; Dr. Dixon, Preston; Dr. Fisher, Chelsea; Dr. Appleton, Steines; Mr. Bolton, Kustendjee; Mr. Conry, Portsmouth; Dr. Weir, Leicester; Mr. C. Roberts, London; Mr. Startin, London; Dr. Thompson, South Kensington; Mr. J. Rutherford, London; Dr. Day, Stafford; Mrs. Spencer, Newcastle-on-Tyne; Dr. Bell, Glasgow; Dr. Recon, Stallingborough; Mr. Rankon, Sunderland; Mr. Vynor, Chester; Mr. Gibson, Wellington; Mr. Barclay, Clifton; Mr. Sadler, Canterbury; Mr. Laver, Sheffield; Dr. Thornley, Newry; Mr. Walker, London; Dr. Gordon, Madras; Mr. Wells, Colchester; Mr. Royle, Paris; Dr. Shephard, London; Dr. Bradburn, Brighton; Mr. Whalley, Bradford; Mr. Paton, Hemel-Hempstead; Mr. Duke, Dover; Dr. Chisolm, Vienna; Mr. Skirving, Ontario; Mr. Howson, Darlington; Mr. Lewis, London; Dr. Thomson, Luton; Dr. Bentley, London; Mr. Gamble, Lincoln; Mr. Smith; Dr. Morison, Glasgow; Mr. Goode; Mr. Lowndes, Liverpool; Dr. Marshall; Dr. Stewart, Glasleugh; Dr. M'Munn, Belfast; Mr. Proctor; Mr. Holt, Burnley; Mr. Knott; Mr. Cooper; Dr. Marechal, Brest, France; Dr. Chevers; Dr. Sheppard, Rayleigh; Mr. Otton; Mr. Baker; Dr. Shuttleworth, Lancaster; Dr. Taylor; Dr. Dartnell, Liverpool; Dr. Ross, Manchester; Mr. Dodd; Mr. Taberner, Wigan; Messrs. Keene and Co., Bath; Dr. Fowler, Epping; Dr. Gill, Bootham; Mr. Wells, Bath; Mr. Watson; Mr. Burroughs; Mr. Haynes; Mr. Sydney; Mr. Jones; The Dean of Middlesex Hospital and College; L.R.C.S. Ed.; Private; A Parish Leech; A Constant Reader of THE LANCET; M.D.; Kisber; Verb. Sap.; W. A. B.; Dry Soil; The Registrar-General of Edinburgh; Toby Belch; B. C. B. C.; Observator; The Dean of Owens College; J. L.; Dum Spiro Spero; A. B., Peterborough; &c, &c.

LETTERS, *each with enclosure*, are also acknowledged from—Mr. Guilmant, Rottingdean; Mr. May, Bradford; Mr. Abbott, London; Dr. Russell, Edinburgh; Dr. Munroe, Hull; Dr. Greatrex, Lawton; Mr. Holmes, Blockley; Messrs. Samson and Son, London; Dr. Whitaker, Blackburn; Mr. Auld, Edinburgh; Mr. Rawlins, Highgate; Mr. Proffitt, Aberystwith; Mr. Watson, Glasgow; Mr. Nau, Moffat; Mr. Harwood; Messrs. Langston and Co.; Mr. Ladd, Canterbury; Mr. Jenkinson; Mr. Ramsay; Mr. Essex, Pontypool; Mr. Robinson, Northampton; Dr. Morton, Sheffield; Mr. Smith, Felixstowe; Dr. March, Bradford; Mr. Wheeler; Dr. M'Lintock, Salop; C. B. A.; X. Y., Clonee; M.D., London; G. E. S., Halifax; C. R., Barnabury; F. M. C.; Idris; R. H.; Medicus, Penge; Beta, Birmingham; Curriculum; H. E., Kennington; C. E.; J. E. H., Leicester; Medicus, Kilburn; A. B., Stapleford; P. F.; C. D., Brentwood; J. C. M., Hastings; M. W.; J. F. A.; A. B.; M. R., Great Grimsby; Veritas; W. G.; Beta, Ashton.

Church of England Temperance Chronicle, Night and Day, Newcastle Daily Chronicle, York Herald, Harrow Advertiser, Colonies and India, Wrexham Guardian, Salford Weekly News, Annandale Herald, Newcastle Weekly Chronicle, Lancaster Guardian, Keene's Bath Journal, Spalding Free Press, Oswestry Advertiser, Halifax Morning Chronicle, Northern Evening Mail, &c., have been received.

METEOROLOGICAL READINGS.

(Taken daily at 9 a.m. by Steward's Instruments.)

THE LANCET OFFICE, Oct. 17th, 1878.

Date.	Barometer reduced to Sea Level, and 32° F.	Direction of Wind.	Wet Bulb	Dry Bulb	Solar Radia in Vacuo	Max. Temp in Shade	Min. Temp	Rain-fall.	Remarks at 9.30 A.M.
Oct. 11	29·83	W.	49	52	89	61	49	0·04	Fine
,, 12	30·25	W.	45	47	81	60	44	..	Hazy
,, 13	30·35	S.W.	50	56	91	62	42	..	Fine
,, 14	30·18	S.E.	49	51	92	62	45	..	Hazy
,, 15	29·96	E.	52	54	..	59	48	..	Overcast
,, 16	30·05	E.	54	55	..	59	52	..	Overcast
,, 17	30·00	S.S.E.	53	54	..	56	53	..	Foggy

Medical Diary for the ensuing Week.

Monday, Oct. 21.

ROYAL LONDON OPHTHALMIC HOSPITAL, MOORFIELDS.—Operations, 10½ A.M. each day, and at the same hour.
ROYAL WESTMINSTER OPHTHALMIC HOSPITAL.—Operations, 1½ P.M. each day, and at the same hour.
ST. MARK'S HOSPITAL.—Operations, 9 A.M. and 2 P.M.
METROPOLITAN FREE HOSPITAL.—Operations, 2 P.M.
ROYAL ORTHOPÆDIC HOSPITAL.—Operations, 2 P.M.
MEDICAL SOCIETY OF LONDON.—8½ P.M. Address by the President, Mr. Erasmus Wilson.—Dr. Lauder Brunton, "On Venous Pulsation."

Tuesday, Oct. 22.

GUY'S HOSPITAL.—Operations, 1½ P.M., and on Friday at the same hour.
WESTMINSTER HOSPITAL.—Operations, 2 P.M.
NATIONAL ORTHOPÆDIC HOSPITAL.—Operations, 2 P.M.
WEST LONDON HOSPITAL.—Operations, 3 P.M.
ROYAL MEDICAL AND CHIRURGICAL SOCIETY.—8½ P.M. Report of the Committee appointed to Examine into the Relations existing between Membranous Croup and Diphtheria.

Wednesday, Oct. 23.

MIDDLESEX HOSPITAL.—Operations, 1 P.M.
ST. MARY'S HOSPITAL.—Operations, 1½ P.M.
ST. BARTHOLOMEW'S HOSPITAL.—Operations, 1½ P.M., and on Saturday at the same hour.
ST. THOMAS'S HOSPITAL.—Operations, 1½ P.M., and on Saturday at the same hour.
KING'S COLLEGE HOSPITAL.—Operations, 2 P.M., and on Saturday at 1 P.M.
LONDON HOSPITAL.—Operations, 2 P.M., and on Thursday and Saturday at the same hour.
GREAT NORTHERN HOSPITAL.—Operations, 2 P.M.
UNIVERSITY COLLEGE HOSPITAL.—Operations, 1 P.M., and on Saturday at the same hour.
SAMARITAN FREE HOSPITAL FOR WOMEN AND CHILDREN.—Operations, 2½ P.M.
HUNTERIAN SOCIETY.—8 P.M. Mr. Clement Lucas will show a Patient after Operation for Genu Valgum by Ogston's Method.—Dr. Ernest Sansom, "On some common Disorders of Children."

Thursday, Oct. 24.

ST. GEORGE'S HOSPITAL.—Operations, 1 P.M.
ST. BARTHOLOMEW'S HOSPITAL.—1½ P.M. Surgical Consultations.
CHARING-CROSS HOSPITAL.—Operations, 2 P.M.
CENTRAL LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M., and on Friday at the same hour.

Friday, Oct. 25.

ST. GEORGE'S HOSPITAL.—Ophthalmic Operations, 1½ P.M.
ST. THOMAS'S HOSPITAL.—Ophthalmic Operations, 2 P.M.
ROYAL SOUTH LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M.
CLINICAL SOCIETY OF LONDON.—8½ P.M. Mr. Callender: "Effects of the Elastic Bandage" (living specimen); "Cases of Stricture of the Urethra treated by the aid of Supra-pubic Incision into the Bladder." Mr. Howse, "On a Case of Supra-pubic Incision for Relief of Traumatic Stricture" (living specimen).—Sir James Paget, "On Profuse Discharge of a Watery Fluid from one Nostril."—Dr. Farquharson, "On Quinine Rash."

Saturday, Oct. 26.

ROYAL FREE HOSPITAL.—Operations, 2 P.M.

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